HABITAT

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A January afternoon in
Rockcliffe Park, Ottawa.

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Cover design by Phyllis Lee

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LAND POLICY IN SASKATOON

by S. Buckwold, Mayor of Saskatoon

As urban growth has accelerated in Canada during the post-war years, the City of Saskatoon — with its very realistic and farsighted real estate policy — has more than kept pace with overall national development. And while the city's population has more than doubled in 15 years, (46,000 in 1946 and more that 95,000 today) there has been none of the building chaos associated with an explosion of this nature.

Pleasantly situated on the banks of the South Saskatchewan River, Saskatoon is the economic hub of central and northern Saskatchewan. It is an attractive city, blessed with an unlimited water supply, wide tree-lined streets and is the home of the University of Saskatchewan.

Saskatoon's early settlers were too flushed with boom town success to consider orderly growth as their community sprang from a frontier village of 113 people to a flourishing city of 21,000 by 1916. The Saskatoon of that era was a speculators' paradise. Fortunes were made (and lost); land values soared higher than their present level; subdivisions were registered and lots sold miles from the centre of the town. The ultimate "bust" that followed ruined many and the ensuing dry years of the "dirty thirties" proved to be the last straw for many hard pressed property owners. As a result, an unusually large amount of undeveloped land reverted to the city for unpaid taxes.

By 1945, Saskatoon found itself holding title to 8,500 building sites, while comparatively little privately owned land remained within the city limits. The end of World War II signalled a renewed demand for housing following the depression of the thirties and the restrictions of the war years.

It was at this point that the City Council of Saskatoon formulated the land policy which still exists today. Harkening to the discouraging experiences of past years, Council considered it essential that future growth be orderly, that speculation be eliminated as much as possible and that land values be kept low to encourage new house building.

In 1945, a Real Estate Committee of Council was established with Aldermen W. E. Gray, W. Stewart and S. J. E. Sumner as members. Alderman Gray was appointed chairman and served in that capacity until his retirement from Council in 1960. His long tenure in this office was a distinguished one and resulted in a continuity of principle that remained consistent in its basic philosophy.

One of the committee's early decisions was to sell land on a lease-option agreement and all city owned land, with only a few exceptions, was sold in this manner. The lease-option agreement provided that the purchaser of the land must build on the site within a period of one year. The land could not be re-sold as the city held title until completion of the contract obligation. In cases where the city cancelled out the lease-option agreement because construction had not commenced within the specified period, the city refunded that part of the purchase

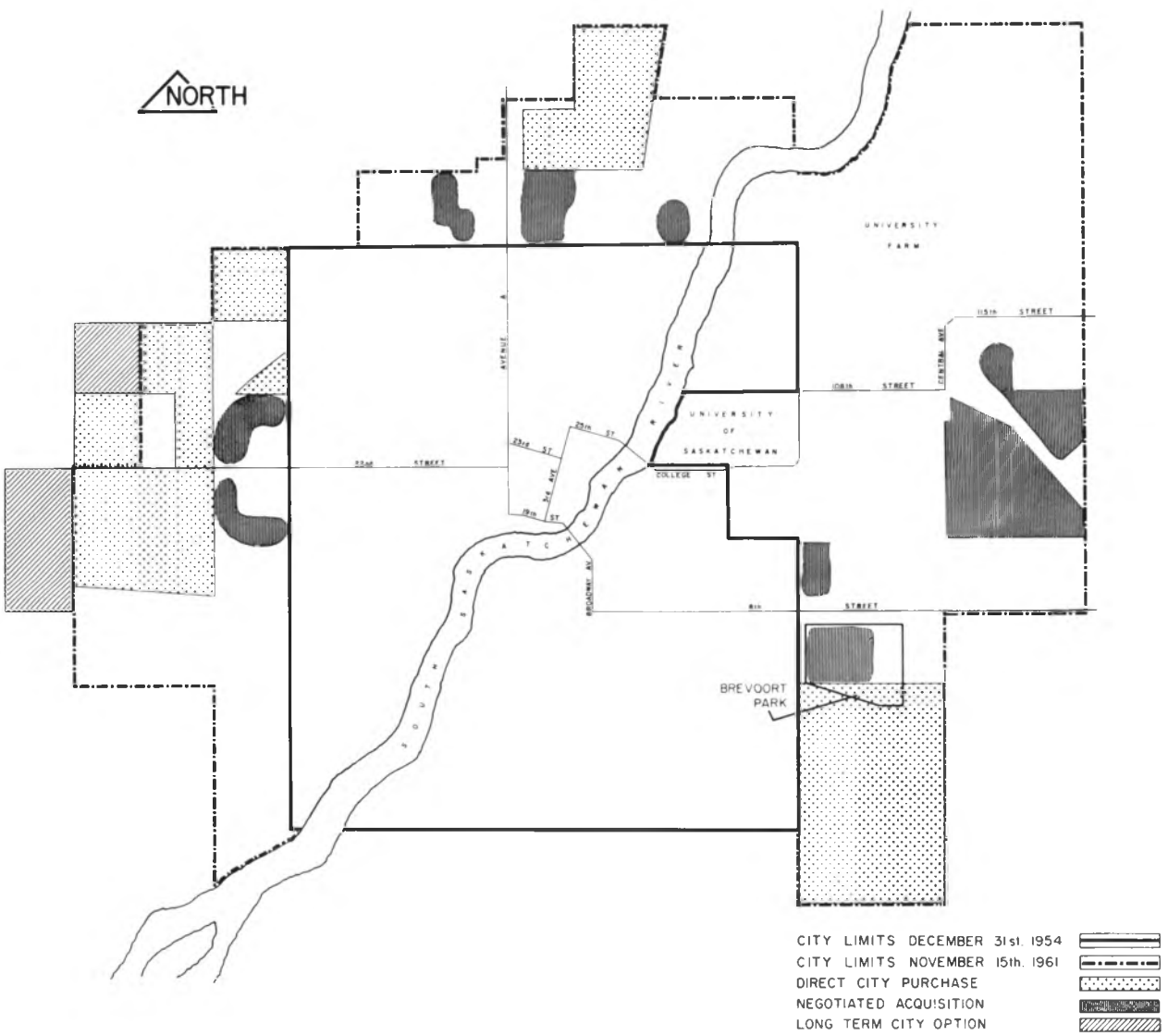
Left, the Grosvenor Park area of Saskatoon, once city owned land, now a beautiful residential community.

price which had been paid, less a monthly rental charge. This principle has been an influencing factor in maintaining reasonable land values.

All land was sold by the Real Estate Committee through the office of the City Clerk and as the work was carried on by existing staff there was no extra operating cost to the city. Prospective purchasers could deal directly with the city or through a real estate agent, although very few sites were sold by agents. The city set prices as low as $5.00 per foot frontage for residential sites, compared with today's average of $15.00.

To encourage larger scale development, contractors were offered land for one-half the assessed value on condition that at least 10 houses be built. This arrangement, however, was in effect for a limited time and land prices are now the same for individual purchasers as developers. Industrial property sales were also controlled in this manner and made low cost sites available for commercial interests.

With land-prices low, new housing flourished in Saskatoon. Central Mortgage and Housing Corporation statistics show 12.1 housing starts per 1,000 of population in the period 1951-1956. This figure increased to 16 per 1,000 (the second highest in Canada) from 1957-1960. Total housing units erected from 1945 to 1961 numbered over 13,000 with a value of more than $105 million. Housing construction reached its peak in 1959 when 1,503 new dwellings were built.



City of Saskatoon — Recent Land Acquisition.

Brevoort Neighborhood, Saskatoon.

In 1954, a Planning Department was set up in Saskatoon and the Real Estate Committee works in close co-operation with William Graham, City Planner. When it became obvious that more land would be needed to meet the expected growth of the city — well in advance of any shortage of tax-title sites — the city began looking to future land requirements. In 1955, a fringe annexation of 2,683 acres —mainly for planning purposes— took place. The rural Municipality of Cory was paid $100,000 for loss of revenue and property. A further 3,684 acres were taken in by the annexation of the Town of Sutherland in 1956 and a trade was made with the University of Saskatchewan, making suitable land available for that institution and in return providing the city with industrial property.

All of these changes were made with a view to consolidating Saskatoon's boundaries and assuring orderly development in a manner approved well in advance by the city's planning groups. The result has been a minimum of fringe development problems and no satellite communities.

By 1957, the Real Estate Committee felt it necessary to begin acquiring land outside the existing city limits. The City Planning Department indicated the directions that growth patterns should take, keeping in mind overall planning requirements and the ability to economically service additional land. Purchases were made at relatively low cost as there was little competition from speculative interests or private developers. Nevertheless, each successive purchase saw the price per acre increase and land values have now reached the stage where further expenditures will be very carefully considered.

To date, the city has bought 575 acres of industrial property at a total cost of $168,415. Land purchased for residential subdivisions totals about 2,000 acres at a cost of approximately $825,000. In addition, the city has a five-year option on 425 acres.

Land sales have been as follows:

Year	No. of Residential Sites Sold	Residential Value	Year Total—All Sales (including Industrial Sites)
1956	600	$ 270,000.00	$ 445,503.32
1957	650	375,677.92	590,804.92
1958	960	674,560.53	827,734.23
1959	1,100	747,224.10	1,154,137.51
1960	700	462,946.43	776,188.73
	4,010	$2,530,408.98	$3,794,368.71

Despite these large sales, the City of Saskatoon still has enough land available to take care of building requirements for the next five to seven years. It is estimated that the present sale value of this property is $6 million. The city continues to sell land at comparatively low prices which has had the effect of making Saskatoon a leader in the field of low downpayment housing. Saskatoon was the first city in Canada where contractors were able to sell a house with a downpayment of $500.

During the early years of the land program, property was sold without improvements — they were carried out by the city on a local improvement levy basis. Policy now favors selling property at a price which includes all improvements with the exception of paving and storm sewerage drainage. The cost of the latter is a local improvement levy.

Private development has also taken place in the last few years. The city encourages this and is pleased to co-operate with those engaged in the operation. There does not appear to be any conflict between the city owned and developed subdivisions and those developed privately.

While it is true that there has been a considerable cost to the city in developing new areas, a substantial profit has been realized as a result of these activities. The profits have been used to purchase additional land and have made funds available to the city for capital expenditures which otherwise would have been met by additional taxes.

Many advantages have accrued to Saskatoon as a result of its real estate policy: land-prices have been kept down; low cost housing has been encouraged; large blocks of land have not been held for speculative purposes so that new developments have not had to "leap frog" unbuilt areas. The land policy has enabled the city to cancel out many small existing subdivisions and in a replotting scheme the city is assured of a majority holding. This is demonstrated in the accompanying illustration of the Brevoort Park Neighborhood. In this plan a considerable area was privately owned but the city became a majority owner through land purchase and was thereby able to control the development.

Planned development has become a reality. Saskatoon is able to do things which are in line with the overall development plan of the city; utilities, services and traffic patterns are being properly utilized. There have been few zoning problems and commercial and other developments are located where they are wanted and not subject to pressures from individual owners. More open space for parks, playgrounds and schools has been made available than under most private schemes and uncrowded building sites have been designed to provide good housing areas.

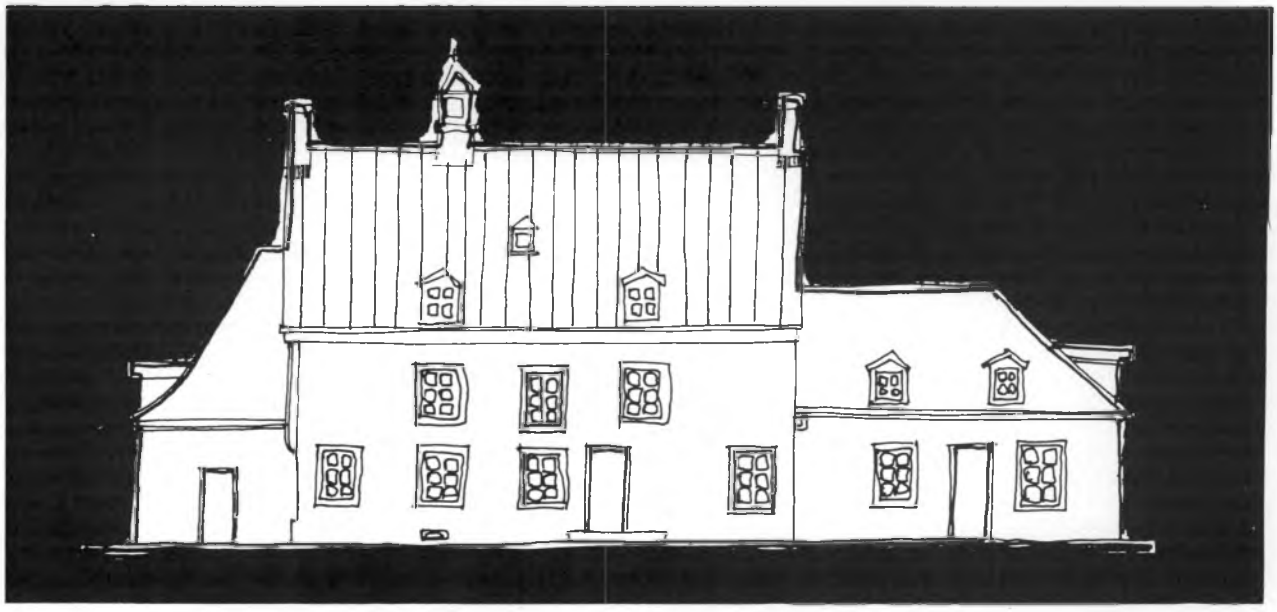
Another major advantage of the long-range land policy has been the provision of integrated neighborhoods. Planning is not conceived for a single subdivision — as is the case with private development — but rather within the principle of an overall plan for several neighborhoods. Each neighborhood is therefore complementary, making for more orderly development.

Each year a survey of contractor's requirements is made and contractors are advised of the development areas available. They are then given the opportunity to apply for sites which are, in turn, allocated by the Real Estate Committee. Every contractor is treated fairly and an equitable division is made of the available land. This allocation is completed very early in the year so that plans for the provision of services can be made and work completed as soon as possible.

Saskatoon's land policy has been most successful and is considered one of the major factors in the rapid development of the city. Only Calgary and Edmonton, of all the metropolitan areas in Canada, have exceeded the percentage growth in the period from 1956 to 1961.

The policy has enabled Saskatoon to maintain its reputation as a well planned city and a pleasant place in which to live and the dividends, both financial and aesthetic, will be reaped by its residents for generations to come.✦✦✦

Mayor Buckwold received his Bachelor of Commerce Degree from McGill University. All his life he has been very active in both business and community affairs in his native Saskatoon. He is Immediate Past President of both the Saskatchewan Urban Municipalities Association and the Canadian Federation of Mayors and Municipalities. He has served as Saskatoon's Mayor since 1958 and was re-elected by acclamation in 1960.



La Ferme St-Gabriel — 1680 Pointe St-Charles, Montréal.

RÉFLEXIONS SUR L'HABITATION URBAINE DU CANADIEN FRANÇAIS III

Ceci est le dernier de trois articles sur le logement canadien-français.
Le dernier paraîtra dans le numéro de novembre-décembre d'Habitat.

par Michel Barcelo

L'avant-dernier article de cette série a tenté de définir un besoin d'équilibre, dans l'habitat urbain, entre la solitude et le silence d'une part, nécessaires à l'homme pour se promouvoir spirituellement et se refaire de l'intérieur, et, d'autre part, cette chaleur communiquée par la bousculade et le contact quotidiens avec les autres hommes et leurs diverses communautés d'intérêts, pour lui redonner le sens de la plénitude personnelle et communautaire, moyen le plus efficace qui soit pour mettre en échec tous les collectivismes totalitaires.

Ceux à qui cette spéculation a pu paraître vague, la retrouveront résumée en une phrase de Kevin Lynch: "A compromise would be found in saying that potential interaction between people should be as high as possible, as long as the individual can control it and shield himself whenever desired. *His front door, figuratively speaking, should open on a bustling square, and his back door on a secluded park.*"

Nous devons avouer que l'histoire de l'habitation nous apporte peu d'exemples et de modèles nous aidant à trouver une solution qui reconcilie ces buts apparemment contradictoires, solution d'autant plus difficile lorsque nous avons à l'inclure dans un complexe métropolitain, où les hautes densités de peuplement sont, sinon désirables, du moins presque nécessaires au bon fonctionnement de l'organisme urbain en son entier. Si, le problème de l'habitat a toujours eu les mêmes exigences, les deux pôles entre lesquels il oscille étant l'individu et la communauté, nous ne lui avons tout de même pas trouvé de solution satisfaisante pour l'intégrer dans une métropole contemporaine, si petite soit-elle, même s'il s'agit de Montréal.

Penser le problème de l'habitat au Canada français urbain, c'est poser un problème aussi neuf que l'urbanisation massive du Canada. De plus, le Montréalais de langue française fut rarement un élément positif dans la création de sa métropole: son attitude en fut une d'inertie, de repliement, devant un phénomène dont l'accélération était fonction de l'injection massive de capitaux étrangers, suivie naturellement par un cosmopolitisme de plus en plus grand, qui put paraître louche et même dange-

reux pour une population d'extraction rurale récente, toute préoccupée de sa survie. Encore aujourd'hui, ceux qui prennent conscience de l'existence du grand phénomène qu'est Montréal, y voient plus la "seconde ville française du monde" que la première grande cité canadienne.

Une réelle prise de conscience de l'urbanisation du Canada français a manqué et manque encore, portant la responsabilité d'un manque d'originalité, d'invention, d'innovation dans les concepts et dans leur application qui eût été nécessaire il y a déjà une cinquantaine d'années. Ce qui eût pu être un appel à la création s'est perdu dans le repliement ou l'admiration béate et la béate soumission à ce que d'autres accomplissaient chez nous, sans nous connaître, parce que nous ne savions pas leur communiquer ce que nous étions.

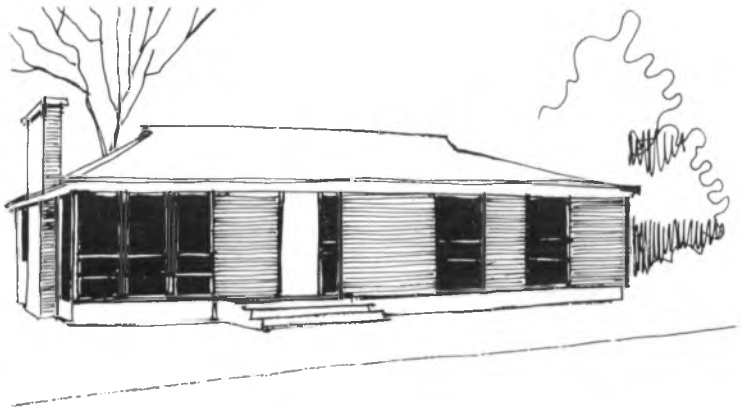
La description, contenue dans le premier article de cette série, de l'urbanisation de notre habitat entre les années 1900 et 1930, a peut-être oublié de mettre en lumière que ce phénomène s'est produit sans qu'on en prenne tout à fait conscience, dans son ampleur et sa direction. Aussi, c'est bien plus d'une série de gros villages à très haute densité que d'une cité qu'il faut parler lorsqu'on décrit le Montréal de cette époque. Quoique les hautes densités ne fussent pas désirées, elles furent dictées par la pauvreté du peuple canadien-français à l'époque, et celui-ci y acquit certaines caractéristiques d'un peuple urbain. Cet esprit communautaire, cette plénitude acquise par la bousculade quotidienne étaient devenus des réalités telles qu'elles existaient au dépens de cet espace de solitude et de silence qui est inscrit comme une autre nécessité au coeur de l'homme.

Une fois cette période révolue, une fois finis les efforts immenses qu'exigea la Seconde Guerre Mondiale, nous étions à une croisée de chemins: il était encore possible de reprendre ces gros villages à fort peuplement, de les lier ensemble, de les agglomérer, d'en faire enfin une cité, tout en réaménageant quelque peu les quartiers et les résidences en place pour répondre enfin à la soif d'un espace de solitude et de silence qui était plus que jamais inscrit au coeur des hommes; les nouveaux logements auraient eu pour fonction de prolonger la même tradition urbaine, tout en augmentant les choix, les possibilités, les nouveaux types nécessaires pour répondre aux désirs d'une société plus diversifiée parce que plus nombreuse et plus riche.

Ou bien, on décidait simplement que c'en était fini de ces quartiers, et de leur encombrement, qu'enfin on pouvait les fuir et leur abandonner les souvenirs de la crise économique et du grand conflit pour aller, en novateurs, refaire le village ou la petite ville ailleurs, là où, enfin, il ferait bon vivre chacun sur son petit coin de terre.

Le second choix l'emporta pour la majorité. La tradition urbaine n'était pas assez forte et trop d'étrangers nous avaient dit que notre ville était laide pour que nous puissions préférer nos "escaliers

Habitations-types 1920 — 1930, Montréal.



Habitations-types
1960 — Montréal.

extérieurs" aux "bungalows" que nos voisins américains construisaient par milliers. Nos intellectuels eux-mêmes n'étaient pas prêts à défendre la cité, du moins pas la nôtre; leurs romans parlaient encore du passé et de la tradition agraire d'antan, alors que les politiciens, forts de l'appui des ruraux, n'avaient aucune sympathie pour les citadins et leur vie trop active, trop évoluée, trop ouverte aux dangereuses réalités de l'esprit.

Même si souvent l'expérience était beaucoup trop coûteuse pour notre pauvreté relative, tout se liait pour encourager l'exode vers les banlieues: les compagnies de prêts, le gouvernement fédéral, et tous ceux qui avaient décidé que c'était un bien grand malheur que d'être locataire et qu'il fallait augmenter le nombre des propriétaires et favoriser la construction de la petite propriété.

Nous voilà donc, après la longue expérience de construction massive d'habitations qui a suivi la guerre, un peu moins évolués que nous ne l'étions dans les années 30, un peu moins urbains, un peu moins conscients de ce que c'est que de créer une grande cité, plus individualistes et moins responsables que jamais de notre destin, de notre urbanisation et de ses conséquences, bonnes ou néfastes.

En 1961, notre choix est limité à trois types d'habitat: le petit pavillon de banlieue, ou une forme plus ou moins bien retapée du logement des années 30, ou encore d'un certain nombre de tours d'appartements au centre de la ville, construites à la va-comme-je-te-pousse, mal insonorisées, implantées dans un système de subdivision du sol qui ne les avait pas prévues, où ni l'air, ni la lumière, ni le soleil n'ont droit d'entrée. C'est à cet échec que nous arrivons après 20 ans de construction massive.

Les illusions ne tiennent pas longtemps devant la réalité. Le propriétaire du petit pavillon de banlieue se rend vite compte qu'il n'habite pas Robie House. Le locataire de l'appartement au centre de la ville s'est vite rendu compte qu'il n'habite pas l'Unité d'habitation. Quant à celui qui n'a pas quitté son logement à escaliers extérieurs, il est peut-

Le Corbusier — Unité d'habitation
1952, Marseilles.

Frank Lloyd Wright — Robie House
1909, Chicago.

être le mieux partagé: bas loyer, faible coût d'entretien, taxes minimums, et cette fraternité humaine, ce coudoiement quotidien dont le Canadien français ne se lasse jamais quand il demeure lui-même, bon enfant et familier avec ses semblables.

Qu'est-ce à dire? Que peut-être il nous faut revenir au choix qui nous était posé en 1945; que peut-être il faut arrêter la machine qui fabrique, vend, construit et hypothèque des "modèles de petites maisons" depuis ce temps; que peut-être, enfin que nous sommes tous logés au chaud, avec plus que le minimum vital, nous nous assoyions pour repenser globalement le problème, en prenant à charge notre destin; que c'est peut-être là l'essentiel de notre combat pour notre "originalité dans le contexte nord-américain", notre "droit à disposer de nous-mêmes", notre "liberté".

Nous devons apprendre à choisir le lieu qui nous servira d'abri. Cet article s'accompagne d'une série d'images: quelques choix possibles, mais non pas les seuls. Car nous avons avant tout le choix d'inventer pour répondre à nos besoins propres. Tout ce que ces articles ont essayé de dégager et de mettre en lumière, c'est ce besoin pressant de créer, après l'avoir repensé intégralement, l'abri d'une vie un peu plus pleine pour un peuple qui s'avoue trop facilement incapable de se prendre à charge.✦✦✦

Monsieur Michel Barcelo fit ses études classiques au collège Jean-de-Brébeuf et y obtint son baccalauréat ès arts en 1956. Il reçut son diplôme de l'Ecole d'Architecture de Montréal en avril 1961, et en 1960, il fut l'un des gagnants d'une bourse de voyage offerte par la Société centrale d'hypothèques et de logement aux étudiants en architecture.

AN INTERIM REPORT ON THE MARK III PROJECT

Mr. Gitterman is the Technical Director of the National House Builders Association

by S. A. Gitterman

The third in a series of test houses has been erected at Rockcliffe RCAF Station, Ottawa. Known as the Mark III Project, the unique dwelling is presently home to a "typical Canadian family" while a team of housing research experts keeps a vigil on the new applications of methods and materials used. The National House Builders Association has been sponsoring, with assistance from Central Mortgage and Housing Corporation and the Division of Building Research, National Research Council, a program to encourage the development of improved or refined house construction techniques to obtain cost reductions without impairing the necessary structural requirements of the building.

Rather than test materials which meet the existing codes and standards, the judgment of the members of the Research Committee of the National House Builders Association has been the basis for determining the trial of a construction system or product. The members of the Research Committee include: W. M. McCance, Builder, Sarnia and C. J. McConnell, Builder, Edmonton, Co-chairmen; S. A. Gitterman, Architect, Ottawa, Technical Director; nine other builders' representatives, four members from Central Mortgage and Housing Corporation and two members from the Division of Building Research, National Research Council.

The decision was reached that the best method of testing new products or construction techniques would be to incorporate them in houses to appraise cost, utility and function. Occupants of such houses would subject them to normal use resulting in valuable field experience as an extension of laboratory tests. In line with this policy, Mark I and II projects were built in 1957 and 1958 respectively.

The Mark I project had a few new ideas but generally did not deviate to any great extent from CMHC minimum standards. For this reason, no difficulties were experienced obtaining building permits from local authorities. With some modifications, many models were built in addition to the original one constructed at Preston, Ontario by Mr. George Hipel. The knowledge gained from the Mark I project resulted in many changes to the building codes and standards.

The Mark II departed to a much greater extent from housing standards and local building codes. It contained, for example, sealed windows and a special heating and ventilating arrangement and had a somewhat radical plastic roof and floor design. Because of these innovations, great difficulty was encountered in obtaining a municipal building permit, but as the house was to be used for testing purposes Calgary issued the necessary permit and one Mark II project was constructed in that city.

Although not all the innovations were a success, the sealed windows and special heating and ventilating arrangement were practical enough, with refinements, to be incorporated in the Mark III.

The Mark III project is a complete departure from codes and standards. Consequently, it was necessary to find a location where their restrictive

influence could be disregarded when development of the project was commenced in 1959. The house is a test vehicle for construction systems and products, but the design of the house itself was never intended to be a solution to the low-cost house problem. The house was constructed on the premise that skilled architects and designers could incorporate any new products or building methods which tended to reduce costs and thus obtain larger and better houses at equal or less cost than would evolve from conventional techniques.

The RCAF through an arrangement with the Department of National Defence and CMHC allowed the Mark III project to be constructed at its Rockcliffe Air Station. The location was ideal for two reasons; a building permit was not required on Crown land and it was conveniently located for interested government departments. The Division of Building Research kindly offered to make observations and recordings on the test products while Forest Products Research Laboratory will thoroughly test the durability of the creosoted wooden foundations. The Ontario Research Foundation in co-operation with the National Department of Health and Welfare will study the performance of the sewage disposal unit.

So that the house would be tested under normal living conditions, the RCAF permitted Sgt. P. N. Turner, together with his wife and two children, to take occupancy of the house on July 2, 1961. They have proved so co-operative that they were made Honorary Members of the Research Committee and will make reports from the family's point of view. They have been asked to comment specifically on the plan arrangement; adequacy of storage and dinette space; kitchen cabinets; usefulness of bamboo closet doors; the heating and ventilating system — particularly the lack of ventilation in the bathroom; the sound proof quality of interior and exterior partitions and the function of various technical parts.

Manufacturers, with vested interest in construction were invited to participate in the project. It was felt that a test house would be an ideal vehicle for products that had never been tried outside a laboratory and also that discussions between manufacturers' representatives and Research Committee members might stimulate new developments. This proved to be the case and after several meetings, a new type of interior wall partition was developed and a new use for an established material was tried on the exterior face of the house.

At first some of the manufacturers had reservations about trying an unproved product on a structure that was sure to be widely publicized. A failure, although of scientific interest, might condemn a product in the public mind before it could be fully developed. This reasoning was valid and the Research Committee agreed that the experimental aspect of the project would be stressed, while failures would be discussed with the manufacturer concerned and not unduly publicized.

The house design used in the Mark III project evolved from the Marks I and II. The plan was refined and was kept simple in shape and framing. For the sake of economy, two basic requirements were established; the plumbing fixtures were kept back to back as much as possible and a crawl space was used instead of a basement.

The elevations were also kept simple and fixed glass windows and "Transiply" finish used. "Transiply" is a variation of "Transitop" — an asbestos-finished board with hard layers of asbestos on each side and about two inches thick. "Transiply" itself is 7/16 inch thick with the hard asbestos coating on one side only and is used as a combined exterior sheathing and finish. The product was modified specifically for the Mark III project and is now available commercially.

The house was planned according to "Modular Co-ordination" and the four-foot module of sheet material was dimensioned from the inner faces of the exterior wall. This resulted in overall dimensions of 32 ft.-8 in. x 28 ft.-8 in. which required adding end sheet strips of four-inch widths to the plywood floor. The carport entrance is at the rear of the house because the houses in the area face a park and pedestrian access walks, with the back bordering a service road. A. B. Taylor Construction Ltd., a local member of the NHBA, was given

the contract to construct the house.

The construction and assembly techniques were developed with the prime objective of reducing cost. However, a system which might have a higher material cost than a conventional one, but could have a potential for future cost reduction was generally accepted for trial.

Wherever possible, the techniques used were adaptable to the small builders' operation. In fact the small builders' needs entered into the considerations of the Research Committee more than those of the larger builders who can generally afford to try new ideas on their own. Because of the growing interest in "components" for house building and owing to the late start of construction — November 1960 — the panels were constructed indoors. The Forest Products Laboratory kindly permitted the use of its shops for this purpose and fabrication was started the first week in December. Four-foot panels have been used quite extensively in the past, but required duplication of materials at each joint and restricted design and for that reason larger panels were tried in this project.

Excavation for the Mark III took place on a low-lying site of poorly drained clay loam soil. It was originally intended to level the wooden foundation walls by placing them directly on the ground, but as this was the first trial of wood used for this purpose, a small concrete footing 6 inches deep and 12 inches wide was laid to obtain a positive level. The excavation for the house extended to a depth of 18 inches with the exception of a hole 6 ft. x 6 ft. x 6 ft. which was dug under the utility room to house the individual household sewage disposal tank and necessary apparatus. From the finished grade to the bottom of the footing measures two feet. The elevation of the house will be under constant observation for any indications of heaving.

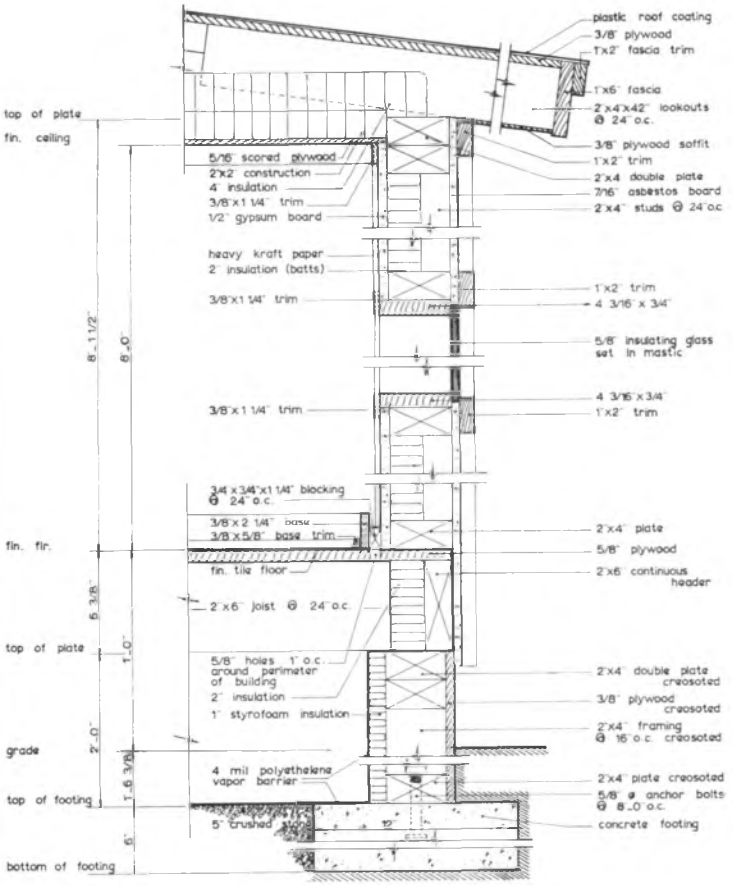
As mentioned previously, the house was to be erected over a crawl space and the first decision was to use a pre-cast concrete foundation wall and, as this method had been used in the U.S.A., there was no necessity for further testing. Forest Products Laboratory reported pressure creosoted lumber has been known to exist in contact with the earth for 75 years so, as an innovation, the foundation walls were made of this material. Two x 4 in. red pine studs and plates covered with ½ in. plywood were used and all were pressure treated with creosote. Owing to a shortage of creosoted lumber, the crawl space centre bearing wall was made of untreated lumber. The lumber is No. 1 merchantable red pine, dressed four sides and pressure creosote treated to a net retention of eight lbs. per cubic foot. The plywood is select sheathing grade Douglas fir, ½ in. thick, also treated to a net retention of eight lbs. per cubic foot. The polyethylene vapor barrier and insulation as shown on drawing #1 were installed later. Since construction was started in late fall, the footings of the house were protected with about two feet of straw while fabrication continued in the shop at the Forest Products Laboratory in Ottawa.

The floor system is a series of stressed skin panels 14 ft. 4 in. long x 8 ft. wide, as shown on drawing #2. The joists consist of 2 x 6 in. spruce at 24 in. o.c. The top skin is ⅝ in. fir plywood sheets jointed as shown on drawing #2. The bottom skin consists of ½ in. fir plywood 4 ft. x 8 ft., set in the centre of the panel. All of the framing members were nailed with 4 inch common nails and the plywood sheets were joined with casein glue and nailed with 2½ inch common nails @ 8 in. o.c.

Before fabrication, a test floor panel 14 ft. long by 4 ft. wide was made. It was tested to destruction at the Forest Products Laboratory during October, 1960 and failed at 145 lbs. per sq. ft. There was very little deflection right up to failure.

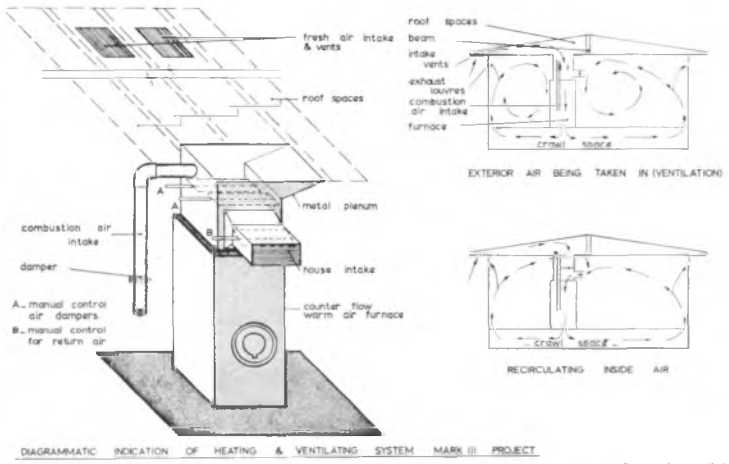
From the experienced gained on this panel construction, it would be better to pattern the house with the four-foot module in the exterior dimension rather than the interior. This would save cutting extra pieces of plywood and extra blocking. The 14 ft.-4 in. x 8 ft. panels were found to be clumsy but could be handled by five men with some difficulty.

The exterior walls as shown on drawing #3 are made up of panels 12 ft. long by 8 ft. high and consist of 2 x 4 in. studs @ 2 ft. o.c. The exterior combined sheathing and finish is 7/16 in. "Transi-

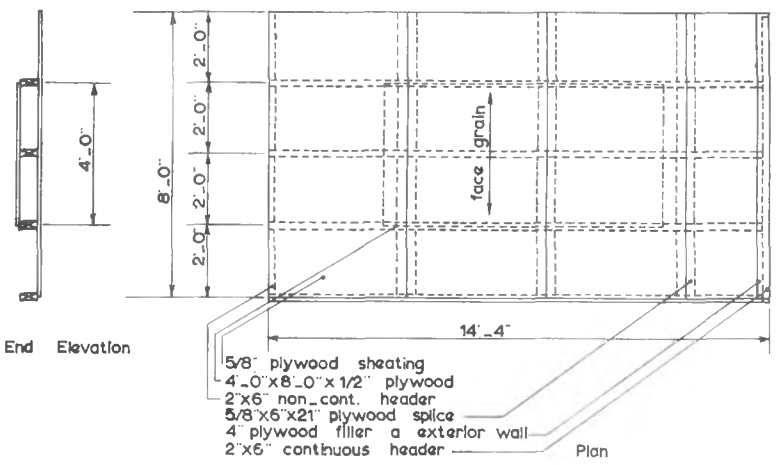


WALL SECTION BB Scale 3"=1'-0"

drawing #1, 3

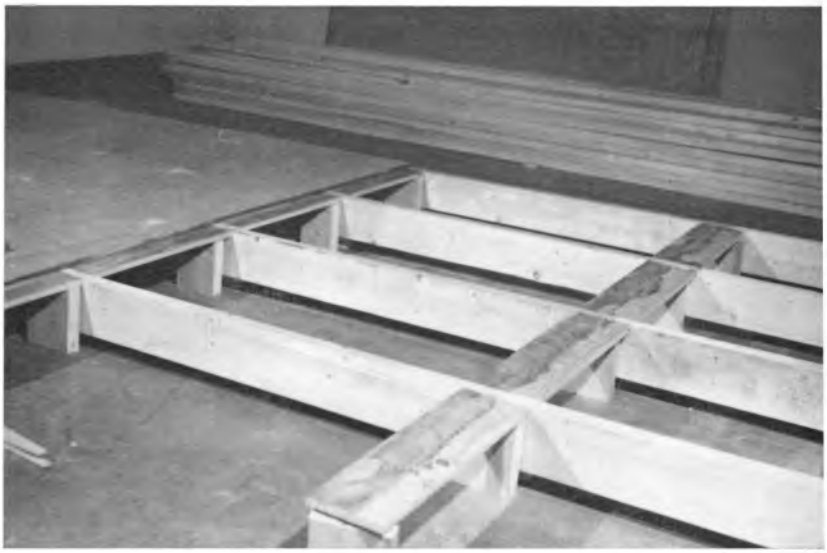


drawing #4



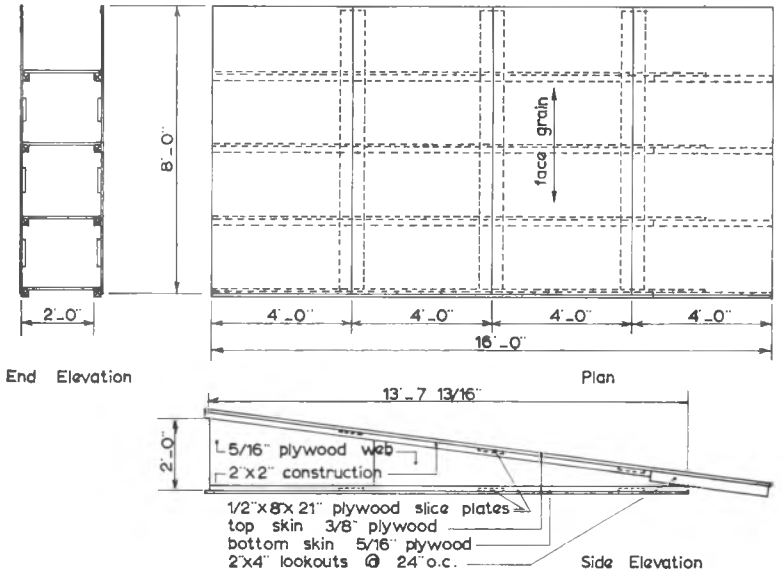
STRESSED SKIN FLOOR PANEL Scale 3/8"=1'-0"

drawing #2



Top photo, floor panel framing showing splice plates and temporary blocking.

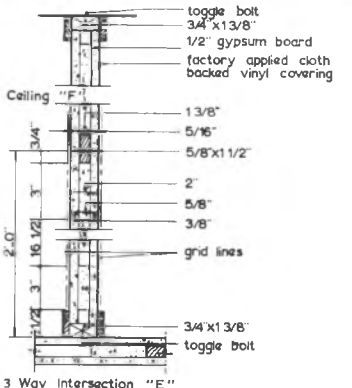
Right, placing floor panels



STRUCTURAL BOX ROOF PANEL Scale 3/8"=1'-0"

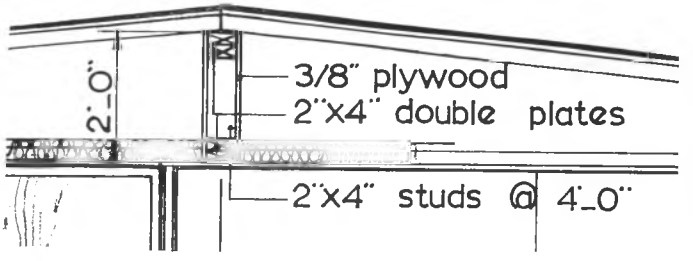
drawing #6

DOOR & WALL ELEVATION Scale 3/8"=1'-0"



INTERIOR WALL DETAILS Scale 3"=1'-0"

drawing #5



drawing #7

Top photo, kitchen cabinets, interior partitions and doors.

Left, fixing plywood over ridge of roof.

ply". This was nailed to the studs with galvanized 1½ in. nails @ 8 in. o.c.

The insulation in the stud spaces is 2 in. "J.M. Spintex" batts with no vapor barrier, but a vapor barrier paint was used on the inside wall surfaces. It is considered that the "paint vapor barrier" may be adequate, and will be observed by the Division of Building Research. The inside face of the studs was covered with standard ½ inch gypsum board. The joints were not taped but were covered with Kraft paper which was applied wet on site after erection of the house and was fixed only around the edges. When dried, it became taut and made a fairly attractive cover.

The windows are "Twindow" fixed with no opening area and were installed as shown in drawing #3. Ventilation for the house is obtained through the heating system as described under the section on heating and indicated in drawing #4. The glass is held in place by means of 1 x 2 in. battens which are removable for changing broken panes.

No lintels are provided over the window and door openings because it is expected the surface skins of plywood and gypsum board combined with the framing will take the place of structural members.

The interior partitions consist of panels 2 ft. wide by 7 ft.-9½ in. long, made of two sheets of ⅜ in. gypsum board and studs of ⅝ in. board so set as to form a groove on each side for jointing with splice. The installation method is shown on drawing #5. The floor, ceiling and wall runners were designed so that any size panel could be inserted where required. The panels were prefinished on each side with a cloth-backed polyvinyl chloride of grey color.

Exterior doors and frames were installed conventionally. The interior door frames extend from floor to ceiling and are installed so as to absorb the strain of hinges and slamming. The doors were originally designed to be a full 8 ft. in height, but proved too costly so standard 6 ft.-6 in. doors were used with sections of door panels above them.

The roof system consists of "boxed girder trusses" (see drawing #6) made up of 2 x 2 in. wood members and ⅜ in. fir plywood with the whole assembly glued and nailed. Because of the unusual design and particularly the method of supporting the "trusses" by the top 2 x 2 in. members, a test was made in the Forest Products Laboratory. The trusses performed well, breaking at 112.5 lbs. per sq. ft. and like the floor system, there was little deflection right up to destruction.

The test panel was 14 ft. long x 4 ft. wide and was so light and easy to handle by two men that a decision was reached to fabricate the final ones 8 ft. wide. This larger size was found to be too heavy and clumsy to handle so the last two panels were reduced to their original size.

The assembly of the roof components was rather difficult. The end splice blocks were so spaced that the 2 x 2 in. members fitted into place when the sheets were dropped onto the vertically supported web members. The insulation consisted of 4 in. "Spintex" batts without vapor barrier. During assembly the batts kept falling, even though they had been "tacked" in place with spots of glue. The 8 ft.-wide panels were extremely clumsy and difficult to lift into position and some of the wall top finishes were damaged during this process. Since the spaces between the "trusses" were virtually enclosed, the electric outlets were pre-wired with the wire coiled and tied at the ends of the panels.

The undersides of the trusses were finished with plywood "scored" into 6 x 12 in. rectangles to help conceal the joints when the ceiling was installed. Generally, the final effect is not unpleasant, but there are a few places where a gap as much as one-quarter of an inch is visible. The deck was covered by ⅜ in. plywood and a space was left near the ridge, approximately 6 in. wide, on each panel. This was filled in, after field assembly, with a piece of ⅜ in. plywood.

Truss spaces are not ventilated and this condition is being studied carefully to determine if lack of air will be detrimental to the structure. The paint on the ceiling acts as a vapor barrier. The roof panels are supported on a boxed plywood spinal beam 2 ft. deep, made up of 2 x 4 in. members

with ⅜ in. fir plywood on each side, as shown on drawing #7.

The roof covering consists of a butadiene styrene polymer which had not been previously used for this purpose. It is white in color to reflect heat during the summer and because of its new application, performance will be watched closely by the Division of Building Research, National Research Council.

The heating system is a refinement of the one used in the Mark I and II projects and makes use of the crawl space as a heating plenum. The furnace is an Iron Fireman F1D-84 custom Mark II horizontal oil fired furnace. The input rating is 105,000 B.T.U. and the fan capacity is 850 C.F.M. The furnace has a .75 gal. nozzle with induced draft through a 4 in. chimney. The principle of the system is shown on drawing #4. A counter flow furnace with no ducts forces heated air into the crawl space. The air then filters up into the house between the baseboard and the inside face of the outer walls and the air is returned to the furnace through a grille located at the top of the heating unit. By this method, all of the air in the house is heated and a gentle movement of warm air flows up over the inside face of the exterior walls.

For ventilation, the grille in the upper part of the heating unit is closed. At this point another damper opens to a duct through the ceiling space, which in turn opens to the outside air through grilles located over the main entrance. In the winter fresh, cold air is drawn through the furnace, heated and expelled into the house. Since the return air damper is closed and all the windows sealed, a pressure builds up in the house, which when released to the outdoors, takes vapor and dehumidifies the air. It was planned to install a "humidistat" control which would open and shut the necessary dampers to re-circulate or bring fresh air as required by the relative humidity in the house and to provide "pressure" louvers in each end wall which would release air to the outside when a slight pressure built up. However, controls and louvers have not been installed and the dampers are now being controlled manually, because the Division of Building Research wished to study air infiltration into the house and requested that the louvers be omitted. There is reason to believe that air escapes through the 4 in. duct which was installed as an intake to provide combustion air.

The system is also planned to provide cooling in summer. On hot days, the window drapes should be drawn, thereby reducing solar heat gain as much as possible. In the evening, the furnace fan can be started and the dampers arranged manually to bring in outside cool night air until morning when the system can be shut off, preferably before sunrise.

The plumbing system, although very simple, was complicated by the installation of the individual household sewage disposal unit, consisting of motors, pumps and vents.

All drainage piping is of polyethylene and the water supplies, both hot and cold, of polypropylene. The advantages claimed for the polypropylene pipe are; (a) greater rigidity, requiring less hanging preparation, (b) ease of assembly and (c) resistance to fracturing under high temperatures. The plastic piping joints were fused to metal except at adapter fittings to allow the use of threaded joints.

The lack of depth in the interior partitions prohibited the installation of standard electrical boxes for outlets. With only ⅝ in. space between the ⅜ in. gypsum faces, a low voltage, remote relay wiring system was the answer to the problem. This type of wiring increased the electrical costs by about $100.00 over a standard installation.

The sewage disposal unit has three motors, but as the pit for the equipment — six feet below the crawl space — is in very damp ground and because of the experimental nature of the installation, two sump pumps with separate motors were placed in the excavation. One extra motor, which has since become extraneous, was also used in case of a tank overflow. As a result, a 20 circuit, 100 ampere thermal magnetic breaker panel is in operation with 18 of the circuits in use. Six circuits are devoted to the motors, two to the dryer cable, two to the range, two to the domestic hot water heater, one to the oil

burner and one to a 1500-watt outlet in the kitchen. Four circuits are used to serve the rest of the house. Although the roof panels were pre-wired in the shop, the interior partitions were wired and outlets installed directly on the job. "Fishing" through the narrow ⅝ in. spaces was difficult and the electrician claimed this increased electrical costs substantially. To obtain economies, the interior partitions should also be shop wired. This aspect of the installation will be given further study.

Like the plumbing, much of the abnormal cost of the electrical installation is caused by the sewage disposal unit with return trips necessitated by the novel arrangement.

If the sewage disposal unit proves feasible, in future it undoubtedly would be delivered as a "package" with all apparatus and wiring in place. The installation would be simply done with one electrical connection.

Only the trim and two elevations were painted on the exterior, while the other two walls have been left in their unfinished state for observation. All interior paint is of a vapor barrier type which will be observed closely for performance. There is no other separate vapor barrier in the walls or ceiling.

For several years, Central Mortgage and Housing Corporation has sponsored the Ontario Research Foundation in the development of an individual household sewage disposal unit. The system re-uses the flushing water over and over and it is hoped it will eliminate a sewer connection to the house for human waste disposal. Patents covering the U.S.A. and Canada have been applied for through Canadian Patent Development Ltd.

After exhaustive laboratory trials, a major field test program is under way with two systems of units being used. One is a completely re-circulating type with no outflow while the other is a flow-through using the same principles which discharges into a field tile bed. One of the flow-through systems has been operating in Downsview, Toronto, for approximately one year with satisfactory results. Another has just recently been installed in the Willowdale area of the same city. The latter has observation ports in the field tile bed so that a careful record may be made of the discharge.

In co-operation with the Department of Northern Affairs and National Resources, a self-contained re-circulation unit is being tested at a school in Cape Dorset, Frobisher Bay. The school has approximately 100 pupils with a six toilet washroom. The test results on this unit will not be complete until 1963. The Mark III house has the self-contained re-circulating type for single family dwellings.

In summation it should once again be emphasized that this project, as in the case of Marks I and II, is a vehicle for testing advanced ideas directed at improved efficiency and lower cost. Many ideas may not be satisfactory but undoubtedly, as in the past, some will be of value.

Although it would be premature to fully assess the results, the following comments are probably in order at this time. It is envisioned that the initial impact of the sewage disposal unit will be in Canada's northern areas, but it is quite possible that the flow-through system could change the whole theory of subdivision planning in the near future by eliminating the need for sewage lines and providing an effective substitute for the septic tank. The unit, in the first few months of operation, has performed up to laboratory standards except for some mechanical failures — anticipated to a large extent — when put to the test of full household use. These have been rectified and it will now be possible to make a more thorough test of the principles involved.

As mentioned previously, the heating and ventilating system is under close scrutiny by the Division of Building Research without benefit of an automatic "humidistat" control. When the instrument is installed, an inexpensive air conditioning method may result.

The interior partitions, roof covering, floor panels, wooden foundations and other innovations may all lead to simpler, faster and less expensive construction techniques. When all test data is assembled, standards and codes will undoubtedly be amended to profit from the satisfactory research obtained.✦✦✦

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R. P. Opie is a member of the Advisory Group of Central Mortgage and Housing Corporation, as Advisor on House Construction. He recently attended the Forty-fifth Session of the International Labour Conference in Geneva and on his way home, briefly took a look at government housing in Zurich.

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ZURICH:

GOVERNMENT HOUSING IN A PLEASANT INDUSTRIAL DEVELOPMENT

by R. P. Opie

Many cities have been described as gems in priceless settings, but Zurich, largest city in the land-locked republic of Switzerland, could be described as being an industrial diamond in beautiful surroundings. It falls short only insofar as industry has certain disciplines that dictate economic and practical terms of reference that are somewhat restrictive and regimented, but it is one of the best situated and most pleasant industrial cities in Europe. From their vantage point on the northwestern tip of Lake Zurich, the city's 450,000 inhabitants look southward on a vista of blue water and snow peaked Alps. At their back door is the level, forested terrain of north-central Switzerland with the German border 20 miles distant.

The beginnings of the city go back to 3,000 B.C. when the early settlers built their pile dwellings on the low-lying lakeshore from which the glaciers had but recently withdrawn. Over the years, residential development too has crept back from the lakefront to be supplanted by Zurich's industrial core. However, the latter is well arranged and the usual dirt and squalor have been largely avoided. When viewed from an adjacent hillside, the city's complex of industry, park, lakeside and dwelling does not appear to jar or have the customary ugly blemishes. It is now the largest city in Switzerland followed by Basel, Geneva and Bern, the Federal capital.

The most rewarding or spectacular and attractive architecture in Switzerland is probably to be found in the countryside and in the smaller towns although fine examples of the ancient structural arts with highly decorated façades are also found in the older parts of the cities. The original intent of this embellishment might not be in the best of taste today, but it was probably designed to show the outside world the wealth of the owner. On the other hand, it has left a heritage that is of immense interest to the architect, artist and the tourist.

In the past few years, the timber-poor Canton of Zurich, as compared with the greater part of Switzerland, has produced some very attractive half-timbered houses. But masonry and concrete con-

struction is now much more prevalent and in some cases, is producing developments that, if taken out of their setting, might well be in Canada or other areas of North America.

Since the early 1940's, more than half of all Swiss housing has been subsidized by the government and it has been said that slum areas are virtually non-existent in Zurich. Certainly there are no exterior slum areas in the city, but a casual glance into the interior of some of the low-cost developments that have been in existence for 10 to 15 years leaves a great deal to be desired from the point of view of durability and maintenance. These interiors have also a somewhat austere aspect which Canadians might not care for if they were present in some of our own developments of the same age. It must be added that these observations are by no means general and there is no doubt a better excuse for these relatively few problem areas than there is for the slum areas of our own younger continent.

Nearly all land is privately held and this has resulted in choppy and sporadic small developments. Large, well planned developments are rather conspicuous by their absence, and there is nothing approaching shall we say, the New Town Developments of Great Britain or the rejuvenation of a whole area within any municipality. Possibly one of the reasons for this is that condemnation and expropriation are virtually unknown and private developers, no doubt because of the cost factor, do not appear to have gone ahead with co-ordinated and well planned purchases of adjoining property.

Dwelling construction generally is from the private luxury type to the variety built by and for "workers" which again runs from the medium to highly subsidized. It covers a wide range and is difficult to describe adequately. Subsidies in one form or another, but more often a straight grant are as follows: the Township may give from 10% to 20% of the value of land and buildings; the Canton 10% to 15%; and the Federal Government about 10%— on the value of the buildings only.

There appears to be a form of construction control on the granting of subsidies as a subsidy is not usually provided where the cost of the major rooms in a development is more than approximately 13,000 Swiss francs each, or about $3,000.00 Canadian at the present rate of exchange. (4.38 Swiss francs = $1.00 Canadian). These subsidies are available to private builders as well as co-operative organizations and associations of various types. At the moment, however, only about 5% to 10% of the total subsidies actually go to private builders, although they are entitled to about three times this amount under the regulations.

The balance of financing, over and above any subsidies, is derived from diverse sources, usually somewhat as follows — the co-operative society or association about 5% to 10%; the bank or loan society about 60% to 70%; and the town or municipality the remainder, or about 20% to 30%. All of these are generally at an interest rate of from 2 to 3½%. Amortization ranges from 50 to 100 years.

Of considerable interest is the income and rental structure in the Zurich area and the further possibilities associated with rental subsidies in addition to those previously mentioned. The average wages or incomes of those engaged in construction or industry — in other words, those that are considered to be the main corps of "workers" — run from 600 to 1,200 francs or $135.00 to $275.00 per month. This will also represent the upper low income and all the middle income bracket of the gainfully employed in Zurich. Generally speaking, rentals appear to take from one-fifth to one-quarter of the average income, and unless one belongs to one of the co-operatives or associations the ratio can run as high as one-third of the income.

If you have an income of less than 6,000 to 7,000 francs per year, ($1,375.00 to $1,600.00) and have at least three children, you can obtain a subsidy towards your rent of approximately 60 francs per month. If your income is less than 5,000 to 6,000 francs per year and you have a large family of about seven children, the subsidy may be as high as 150 francs per month. It should be pointed out, that these rental subsidies are only paid if your rent is more than 15% of your monthly income.

Unfortunately, like many Canadian cities, Zurich has yet to conquer the problem of sewage control. A major portion of the more centrally located dwellings along the lakeshore cannot enjoy the benefits of this site to the extent that they should because of industrial and domestic water pollution. When compared with the problems of Toronto and Montreal, it can be said that the difficulties of Zurich fade into comparative insignificance and in any case will be rectified in the near future.

Figures 1 and 2 illustrate two excellent examples of older housing built under the auspices of the city just prior to World War II. They are the older apartment type, embodying the typical Swiss city architecture of that time. They are well landscaped and in their maturity are pleasing and restful to the eye. The excellent interior construction has also withstood the test of time. The entrance hall is small but very similar to those found in many of our smaller apartment buildings; the stairway is robust, well finished, clean, tidy and not as badly worn as could be anticipated.

While the interior of an individual apartment is vaguely disappointing, the size is of quite a reasonable, providing four rooms and a bathroom. The rooms are somewhat smaller than might be expected, but the general treatment could have been produced almost anywhere in the world. For example, the interior finish, trim, arrangement and lighting are similar to our own and there is nothing that would indicate, while standing in the apartment, that you are necessarily in Switzerland. The quality of finish on the walls, fixtures and floors is good but not up to the standard in this country. The flooring is constructed of well varnished boards, but there are the usual difficulties that this type of flooring will produce. The rental for this accommodation, which is very low by our standards and reasonable by Zurich's, is about 160 Swiss francs per month, including a form of heating. This is equivalent to approximately $37.00 per month.

Figure 3 shows a much more modern and newer apartment development adjacent to a small park towards the more northwestern part of the city. Here the rental for a three-room apartment is 250 francs per month and 300 francs per month for a four-room apartment. While this is not too costly, at $57.00 to $68.00 per month, it can be noted that it represents a ratio of about 25% on the extreme upper limit of the average wage of the industrial or construction worker in Zurich. This is a private development and in all probability the occupants in general are not construction or industrial workers, but are white collar employees.

Still another apartment development shown in *Figure 4* was constructed about 25 years ago and was sponsored originally by a private co-operative or building association not connected with any particular industry or trade. It consists of small buildings comprising anywhere from four to perhaps eight apartments or flats. It is not possible to ascer-

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tain the type of construction, but it appears to be mainly masonry foundation with basement, wood structure and a type of stucco or plaster exterior finish. Some exteriors are in a form of stucco and others in a type of brushed or figured cement plaster. In their original setting they were rather plain and monotonous, but they have now been enhanced by the usual landscaping which has also been developed and maintained with reasonable care. It gives the overall impression of a quiet, well-treed development, arranged in such a way as to have contrasting effects of shadow and sunlight.

Rentals in this development range from 109 to 125 francs per month or about $25.00 to $29.00, depending upon whether they are basement or upper apartments. However, these apartments are not heated and might be considered somewhat similar to the cold flats in Quebec. A form of individual heating will be supplied for an additional 25 francs.

STADT ZURICH

Stadt Zurich is situated slightly to the northwest of the lake's tip, well towards the central and commercial section of the city. Therefore, it is convenient from a transportation point of view and under the circumstances is a remarkably well designed development. The whole project forms quite a major park in this area with more than ample room for the use of tenants and pedestrians.

Figures 5 and 6 illustrate excellent green spaces, trees and floral treatment. It is a very modern development with a small portion still to be completed. Construction started in 1952 and the project consists of nine multiple family buildings on the Brahmstrasse.

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Total accommodation includes 48 apartments with two rooms, 24 apartments with three rooms, 48 apartments with three and one-half rooms and 24 apartments with four rooms. The complete spread of rentals ranges from approximately $230.00 to about $335.00 per annum. The project is quite highly subsidized in relation to its actual cost, the Canton of Zurich providing 10% and the City of Zurich 29.6%. No doubt the balance of the funds were provided through various building and loan associations, including the co-operative, at very low interest, probably 2% to 3% and the amortization is similar to some of the other projects — anywhere from 50 to 100 years.

BAHOGE ZURICH

Bahoge Zurich is situated to the northeast of the end of Lake Zurich and at the eastern limits of the city. It is a well planned addition to a major developed area known as Hirzanbach and follows the pattern mentioned earlier: small sections, originally influenced by the difficulty of acquiring land under the private ownership system. However, *Figures 7 and 8* illustrate the two types of buildings involved and the excellent treatment of a comparatively small area and the great care taken with landscaping and general layout.

This particular development consists of three buildings, four storeys high, containing apartments (illustrated in Figure 8) and one high-rise building (shown in Figure 7). The latter contains 72 apartments of which 36 have three rooms and 36 have two rooms. Financing of the high-rise building was different from that of the other apartment blocks. The former was financed with a loan from the City of Zurich and the co-operative at an interest rate of 2.9% amortized over 100 years.

The smaller buildings consist of 36 three-room apartments and 36 four-room apartments. This accommodation was subsidized, allowing an economical yearly rental. Financing consisted of a subsidy of 10% of the cost from the Canton of Zurich and a further 10% from the City of Zurich. This whole development was sponsored by the co-operative,

which in English would carry the title of "Building and Wood Workers' Co-operative Association". The rentals in the high-rise apartments range from $465.00 to $580.00 per annum and in the four-storey apartments from $380.00 to $425.00.

STIFTUNG WOHNUNGSFÜRSORGE

This is a typical row housing development with one moderately high-rise apartment that, apart from the local surroundings and some of the landscaping, could well have been built somewhere in Canada. Except for one factor; the external quality of construction is not up to the standard we would expect for public housing developments designed and carried out under the auspices of Central Mortgage and Housing Corporation. The overall effect of this development is quite attractive, quiet and pleasant.

It covers a rather sizeable area and there are 18 blocks of row housing, fairly well spaced and reasonably planned with a high degree of privacy. The privacy undoubtedly was materially augmented by the mature, though not so well maintained landscaping. This project is older than some of the others and was built about 1949. A typical block of row housing is illustrated in *Figure 9*, and *Figure 10* shows a portion of the high-rise apartment block with one of the row house blocks in the background. The screening effect of the landscaping shows up particularly well in Figure 10. It is pleasing, but its maintenance is not as effectively carried out as in other projects. Although the development is situated a fair distance from the centre of the town, transportation is not too difficult. The site for this project is the responsibility of the City of Zurich and comes under its management. The exterior woodwork—particularly the brown sections—shows rather bad weathering and poor maintenance. The quality and upkeep of the interior woodwork, the floors especially, are not very impressive. However, the general environment and surroundings are pleasant and restful.

The blocks of row housing total 120 single family units of varying internal size. The financing of these units constituted a straight cash subsidy of

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20% from the city and a 7.7% loan from the Canton of Zurich which carried no interest. There was also an additional 30% loan from the City of Zurich at 3½% interest spread over a period of 50 years. A four-room house rents for as low as $350.00 per annum and a 6½-room house at $445.00.

The high-rise apartment is not large and contains 12 three-room apartments, renting at 1,400 francs per year — $320.00. This low rental was achieved by a straight 10% subsidy from the Canton and 25% from the City of Zurich. The balance was made up with a loan at 1½% interest over a period of 100 years.

CO-OPERATIVE BUILDING OR TRADE UNION

Another major project is a much older development which consists of several three-storey apartments or flat developments. These housing units are sponsored by and come under the jurisdiction of a Workers' Settlement Association or Co-operative which is quite active throughout Zurich and is known by the title of ASIG. These units have been built for 15 years or more and demonstrate good spacing and nicely treed and fairly well landscaped surroundings. Most of the units contain two and one-half to three rooms including one bedroom. The rental is low at approximately $23.00 per month but facilities are not too good. These units are not heated and heating is obtained by individual means — generally in one room only. They are not equipped with automatic washers and there is no refrigeration.

GEMEINNÜTZIGE BAUGENOSSENSCHAFT RONTGENHOF

This is a much newer development and is considerably to the north and outside the main municipality of Zurich. Its construction is of masonry and it resembles any new development on the outskirts of a Canadian city. *Figure 11* shows a portion of the project. To the right are private houses of another project. Out of the picture and to the right is the main airport of Zurich.

It was mentioned earlier that the scarcity of timber in the Canton of Zurich had created some very interesting half-timbered architectural designs. This project is a good example of the developing trend. It is very modern, including wide paved roads, concrete curbs and contemporary street lighting. There are ten multiple family dwellings or what we would term double duplexes and the full room count is as follows: ten apartments with two rooms, 45 with three rooms, 14 with four rooms and five with five rooms. The building forming the full centre of Figure 11 is actually two structures on different elevations. There are various buildings of this nature in two groups of five.

The total cost of the project amounted to 3,600,000 francs ($825,000.00) or about 106 francs per cubic metre (approx. $1.25 per cu. ft.). The title of this development indicates that it was a Commercial Co-operative Association that sponsored and now operates these dwellings. The Canton of Zurich gave a subsidy of approximately 28% and there is a loan at 1½% interest spread over a period of fifty years while 972,000 francs of the loan at 1½% interest came from the City of Zurich. Rentals are as follows: two rooms, 1,800 francs per year; three rooms, 2,040 francs; four rooms, 2,280 francs; and five rooms, 2,640 francs. This represents a range of approximately $400.00 to $600.00 per annum. The rental in another similar development close by goes as high as approximately $735.00 per annum.

The apartment units are relatively spacious as compared with some of the others in Zurich and would represent a somewhat higher income rate than those previously mentioned, probably resulting in a fair quantity of private transportation. This latter point is important as the project is some distance from downtown Zurich with transportation infrequent.

In these developments heating is provided by a central heating plant and the apartments are quite well equipped with hot water and refrigeration.

The civic authorities of Zurich and the government of the Canton of Zurich have taken what was considered to be their responsibility towards the lower income group very seriously indeed. Further, they appear to have developed the interest of the co-operative, trade or building association on quite a large scale. No doubt some of this activity is due

to the low interest rate resulting from the steady influence of legislation. Nevertheless, it has been apparently well received by Zurich's residents.

Zurich is to be heartily congratulated on the environmental atmosphere and the type of housing being provided. There are, inevitably, some developments that could be better, but most of them are of a high order — making allowances for some of the internal amenities to which we are accustomed in this country. The older and the fairly recent developments show a constant interest in the artistic and the beautiful. This may be disappearing as the volume of modern developments in masonry and concrete on a grander scale appear. But it is possible that judgement should be reserved because the Swiss will probably show the same inborn desire for seclusion and nature, even with high density developments that are well illustrated in Figure 6.

In what are known as community apartment dwellings, the cost appears to be a qualifying factor in that it must not exceed 13,700 francs, or about $3,000.00 per room with any subsidy based on a cost of 12,900 francs per room. In the case of a four-room single family dwelling, the qualifying price rises to 15,300 francs per room with the subsidy based on a cost of 14,200 francs. There is an income limitation on occupancy which at the moment is 11,000 francs or $2,500.00 per annum, with what they call a tolerance in the rental term of 20%. In other words, when you no longer qualify, you can only over-run your tenancy by 20%. The limitation on the provincial loan is 90% of the net total cost of the project. Loans divided more or less equally between the community and the Canton can amount to from 30% with no interest charged, to 40% at ½% interest. The term involved appears to vary up to 50 years although in the low cost projects some loans are even granted in perpetuity.

In the case of general low cost apartment buildings, which would be the type sponsored by a builder, the qualifying cost is somewhat higher at 15,400 francs or $3,500.00 per room with any subsidy based on a figure of 14,000 francs per room. For a four-room single family dwelling, these figures are 17,000 francs and 15,400 francs respectively with limiting income at 15,000 francs ($3,400.00) per year with the same tolerance of 20% of the time of occupation. Loans from the Canton and the community will run up to 30% at an interest rate of 1% over a period up to 50 years. Limitation of provincial loans is again 90% of the net total cost.

For both the community and the general type of apartment buildings, qualification for accommodation is also covered in various ways on a priority basis relative to family requirements.

The elderly persons' dwellings are quite interesting. The limiting cost of a single unit is 21,600 francs ($5,000.00) and that for a couple 32,400 francs ($7,500.00). Limiting income for one person is 6,000 francs or approximately $1,400.00 per year and for two persons 8,000 francs or $1,800.00 with the usual occupancy tolerance of 20%. Limiting personal assets is 10,000 francs plus a private income not exceeding 1/20th of this amount. Loans from the Canton and the community again stand at 30% with interest at half of 1% over a period of generally 50 years. Loan limitation of the province is 90% of the net total cost. There is an age minimum of 60 years.

Occupancy of all forms of housing of the types mentioned has a residency requirement. In the case of the community and town apartment buildings you must have resided two years in the Canton of Zurich and for elderly persons, five years.

The Swiss are to be complimented on their overall handling of housing, their humanitarian approach, their practicality and their accomplishments. Certainly, a full appreciation of some concepts can be of value in our own activities.

Central Mortgage and Housing Corporation has made great strides in recent years along the general lines discussed and some of our projects are excellent evidence of this fact. Undoubtedly a sound start has been made, but there is room for a considered expansion of our endeavours to reach the lower income bracket that exists in considerable quantity in this young but rapidly developing country of ours.✦✦✦

It's smart to live in the ANNEX

Mrs. Johnson, a graduate of McMaster University, is Chairman of the Development Committee of the Annex Ratepayers' Association. Prior to her marriage, she was very active in the town planning field in both Windsor and Toronto, where she made a great contribution to the first Federal-Provincial urban renewal study. Mrs. Johnson worked with Central Mortgage and Housing Corporation to produce for publication Professor Spence-Sale's "Planning Legislation in Canada". Now a housewife, she retains her interest in community affairs.

by Norah Johnson

Moving into its second half-century of activity, the Annex Ratepayers' Association continues to defend the residential character of what was once a fashionable suburb and is now a district of some 17,000 people close to the core of Metropolitan Toronto. Among its members are some whose fathers, at the turn of the century, built the solid high-ceilinged, narrow, deep houses that characterize the area. Tall arching elms, coach houses and intricate wrought iron fences symbolize the era in which the city expanded north of Bloor Street to take in Rosedale, Yorkville and (hence its name) the Annex between 1883 and 1908. But almost all the large mansions and modest single and semi-detached houses in this area of about 4,000 dwelling units have undergone several changes in ownership. The 200 or so members of today's Association therefore include only a few who live where they were born; the great majority are people who have made a conscious choice to live close to the heart of the city. The spirit of a generation ago in defending the area against rooming house operators and other such intruders still burns among those who prize the district enough to buy an Annex house for their own use, despite high down payments and difficult mortgage terms.

In Ontario, at least, vigilance and defence are the chief traits of ratepayers' associations. In this province, the term "ratepayers" describes property owners, all of whom must pay municipal taxes based on the assessed value of their land and buildings, the amount being determined by an annual mill rate. In the Annex, for example, a property which will sell for about $25,000 might be assessed at $7,000; a mill rate of 60 would mean a $420 tax bill for school and most municipal services. This is the owner's stake in the community and though it may be small in relation to his income or the income from his property, it entitles him to a hearing in municipal affairs.

Where once the Annex Ratepayers were made up only of resident property owners, membership is now open to tenants as well, the Association having joined with two lively but small neighborhood organizations formed in the 1950's. The Ratepayers' area did not include the extreme western portion of the present Annex area. In this vacuum, as it were, an energetic leader, Mrs. H. N. Day, rallied her neighbors, including tenants, and set up the West Annex Neighborhood Association, to "improve the appearance of, to maintain the character of and to promote good neighborly relations in the West

Annex." Following this example, the East Annex Neighborhood Association, with similar aims, was founded; its slogan was "It's smart to live in the Annex". Practical projects were initiated and as a result, neglected parks were improved, poor garbage and litter conditions were corrected and some parking and traffic problems were solved, all with the co-operation of civic officials. The Associations worked together when a comprehensive zoning by-law for the City was drafted, replacing, in the Annex, residential restrictions dating back to 1905.

Before and after the passing of this by-law in 1954, countless delegations from the Associations strove at City Hall to withstand the pressures that were gathering force with Toronto's building boom. By 1960, the three Associations, never at variance, were united. Now, with a newly formed Development Committee, the Ratepayers' Association hopes to serve the interests of all residents, including apartment dwellers and to undertake positive projects to ensure that the Annex of 50 years hence will be one of Toronto's most pleasant residential areas.

The Annex, unlike its more splendid sister, Rosedale, is not bounded and protected by tree-filled ravines. Instead, its boundaries are main thoroughfares carrying heavy traffic, and is bisected by another — a potential expressway. Dupont Street and a railway line, with a commercial-industrial strip between, mark the northern limit. Bathurst Street, the western border, is an important traffic and street car route. On the east, Avenue Road, recently widened, is the site of new apartments, hotels, restaurants and specialty shops. Bloor Street, the southern boundary, has been called the Fifth Avenue of Toronto. The University complex, on the south-east has provided a bulwark against the northward march of change, and its students and faculty members have found lodgings in the Annex for decades. The Ontario Parliament Buildings and new office blocks are within walking distance. All these employment centres are expanding. Together with the rapid transit line being built just north of Bloor Street, they are the prime influences in changing the nature of the Annex. Over-parking, excessive traffic and a lack of public open space are only some of the built-in problems that must be solved before the area can comfortably absorb more change.

In the '30's, the Ratepayers contended chiefly with the effects of time and the depression, as well-to-do families moved out of the district and left behind them Victorian and Edwardian dwellings with no other use than for rooming houses, offices or institutions. Wartime orders cancelled the restrictions against rooming houses so that by 1944, the City Planning Board classified the district as "vulnerable to decline". Two impressive streets, St. George and Spadina, were widened and their fine trees felled, hastening the trend to non-residential occupancy.

After wartime inactivity, the Ratepayers' Association was re-organized. It was responsible for preventing the construction of an apartment building on a site which is now the only playground in the district and, in one year, it defeated fifteen applications for change of the residential restrictions.

The Association was dismayed to find that the draft comprehensive by-law of 1952 proposed that restrictions in the greater part of the Annex be relaxed to permit rooming and boarding houses. After public meetings which engendered more heat than light, the final by-law required guest-home owners to observe "Class A" rooming house regulations. However, these standards have proved difficult to enforce with success, depending as they do on neighbors' complaints. An unexpected loophole in the by-law resulted in a rash of high-density and high-rise apartments on the larger lots. These benefitted at first from surrounding trees and gardens, but later they were joined by others — elbow to elbow, picture window to picture window. Zoning, as a protective measure, was failing.

"Something more than legal protection is required to maintain old values and stimulate new development". This was the conclusion stated by a sub-committee of the West Annex Neighborhood Association in its 25-page study entitled "Renaissance of the Annex", completed in 1954. The study traced the pressures and problems caused by the city's growth. It speculated on the future of the

district and on the ways and means of adapting to changing conditions. It took the view that the families of professionals, office, store and factory workers, plus elderly and single people would, in the long run, provide a mixed and therefore stable neighborhood. Financing and modernizing Annex properties were the problems that most urgently needed solution, and these proposals were made for consideration by the Ratepayers and others concerned with community planning:

"Sources of Finance

Problem: To explore sources of finance which will encourage the best development of the Annex by:

a) Investigating and making known the most advantageous methods of financing now available to prospective buyers of central residential property.

b) Approaching private interests who may find the financing of Annex property purchases attractive, or would underwrite remodelling and modernization.

c) Circulating the terms under which the National Housing Act enables the financing of conversions.

d) Suggesting to building firms that there is an unexplored field relative to the "trade-in" value of older houses.

e) Preparing a schedule of costs of recent modernizations and conversions as a useful guide in structural modification."

"Modernization and Conversion

Problem: To demonstrate the possibilities of modernization and conversion.

The alteration of many of the larger residential structures to provide new and well-designed rental housing units is desirable both for the owners and a large number of prospective residents. We suggest as an incentive the following:

a) To interest a number of architects through the Architectural Association in this specific field of conversion.

b) To encourage building tradesmen to make a specialty of the type of modernization required in the Annex.

c) To compile material on financing and on successful methods and types of conversion.

d) To request the advice and assistance of decorators as well as architects and builders.

e) To provide general information on the subject at the request of prospective residents or purchasers."

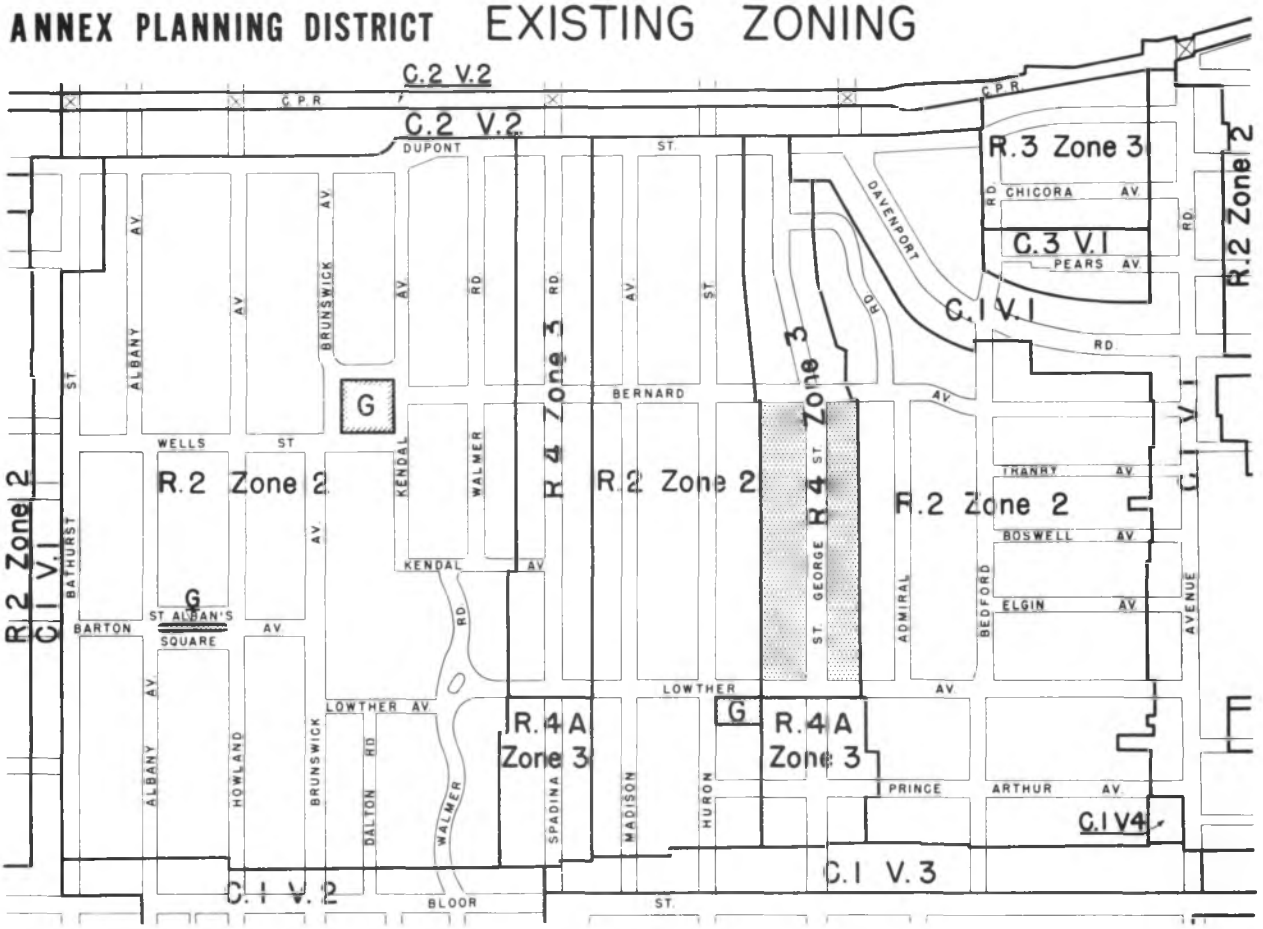
But not until 1959 was the underlying need for an official study and plan for Annex development met. In expectation of this plan, the City Council had withheld decisions on many applications for zoning amendments. Although a new public school had replaced a crowded, obsolete building, proposals for east-west and north-south expressways through the Annex and a rapid transit route north of Bloor were, to say the least, unnerving for the residents.

Therefore the Association welcomed the choice of the Annex as the first of 25 "Planning Districts" to be exhaustively surveyed by the staff of the City Planning Board. The purpose of these surveys is to improve the zoning standards and revise the official plan in the light of anticipated changes in land use, major public works, traffic routes and park requirements. "The Annex District Planning Appraisal", a lengthy, fully documented report, was distributed among interested Annex groups asking for comments. The city-wide organization that specializes in civic affairs, the Association of Women Electors, co-operated in the effort to see that the zoning and planning proposals would be thoroughly understood and discussed by the people affected. Its members worked tirelessly in helping to arrange small meetings of Annex residents, church representatives and other interested groups. Records of meetings and written submissions set forth the questions and reactions of local people before public meetings were held. Comments came from the Ratepayers' Association, the two Neighborhood Associations and the South-East Annex Ratepayers' Association, the Toronto Guest Home Association, a group of fraternities

Typical house types in the Annex show the Toronto of yesterday.

A poorly located high-rise building with the parking density on this particular street illustrating one of the major problems of the Annex.

ANNEX PLANNING DISTRICT EXISTING ZONING



NOTE : This map is not the official zoning map, but a simplified version of it.

Areo covered by special clause in Zoning By-Law permitting existing Dwelling Houses to be used for Institutional, Professional and Administrative Offices.

0 200' 400' 600' 800'

CITY OF TORONTO PLANNING BOARD.

USES NOW PERMITTED*

The residential districts in the Annex are:

R.2 Permits a private detached dwelling, semi-detached dwelling, converted dwelling, duplex, double duplex, triplex, row housing, apartment, up to 3 roomers in a dwelling, boarding house, certain types of school, physician's or dentist's office in his residence, certain community facilities and related parking.

R.3 Permits all R.2 uses and a community centre, student fraternity or sorority house, boarding or lodging house.

R.4 Permits all R.2, R.3 uses, and a private hotel, additional types of school, various types of clubs, nursing and other "homes", and public institutions.

R.4A Permits all R.2, R.3, R.4 uses, and a professional office and administrative office of a business or non-profit organization.

and many individuals. Two of the points of view expressed were;

"The plan is alarming: it meets pressures with orderly retreat. The south-east section of the Annex would be reduced to slums within a few years of the plan's implementation. The R3 Zone 4 section on Lowther Avenue would have a corrosive effect on the residential area to the north. The proposed plan can only invite deterioration."

"The whole of the south-east part of the Annex should be re-zoned to R4A. The new R3 category is most impracticable, as most owners of large houses want to sell for profitable new uses."

Immediately before the public meetings (one for the East and one for the West Annex) were held in the local public school, 6,000 illustrated summaries

** Refer to City of Toronto By-law No. 18642 as amended, for a complete list of permitted uses.*

of the Appraisal were delivered to the residents. Attendance at the meetings was estimated at 750. Each meeting heard a general explanation of the plans, a panel discussion of the issues already shown to be of greatest interest and then broke into groups of 40 or so, according to geographical divisions, to talk about the plans in greater detail. A spirit of calm reason was the rule in some of the groups, in others vehement dispute held sway. The hottest issues were debated again at City Council in subsequent meetings, but most of the factious showed an understanding of the purpose of planning, thereby proving the great value of the information program begun one year before.

The Ratepayers' Association did not question provisions for medium density apartments, but strenuously objected to proposals to create a special office area in the south-east section and to permit fraternities to be established in another section. The proposed boundaries were pushed back. Late in 1960 the revised zoning standards were approved by the Ontario Municipal Board, with the full support of the Association. The tentative Metropolitan plans shown in the Appraisal for two expressway routes through the heart of the district roused wholehearted opposition among the residents. These plans are being reconsidered, with a good chance the major residential portions of the Annex will be left intact.

With realistic zoning and definite plans for expressways, there still remains much to do. A classified system for local roads, a solution to the difficult problem of parking space, more and better designed park space, improved lawn and boulevard treatment and removal of overhead wires are only some of the objectives to be gained with the help of the local aldermen and the city departments.

What else can be done? The Renaissance of the Annex had underlined the financial and structural difficulties that confront owners and would-be owners of existing houses of large and medium size. There is ample proof that individual and semi-detached houses of 40 to 70 years of age can be made liveable in today's terms and in those of many years hence. Large houses have been restored, after 20 years misuse as rabbit-warren rooming houses, to single families' use, often with a self-contained apartment up or downstairs. At least one narrow house affords a pleasant apartment for the owner, with the kind of accommodation best suited to women graduate students on the second and third floors. The improvements needed only the boost that a small Home Improvement Loan can give in paying for basic heating and plumbing renovation.

Ten years ago, some of the short east-west blocks near Avenue Road — perhaps the most attractive group of streets in the Annex — showed several signs of oncoming blight. Individual efforts have brought new life to many of the houses, producing a new air

A beautiful example of the sedate charm of the Annex.

Pride of ownership is reflected in this renovated single-family house.

of prosperity.

The Planning Board's appraisal noted "an appreciable number of deconversions back to a presumed single family status" between 1951 and 1956 and said, "Whether this trend can be continued and encouraged to spread to other sections of the Annex does not depend on the supply of suitable dwellings. There are many that can be so used, but it is rather a question if the Annex can offer the facilities needed by the families that would make such an investment, if the attractive physical setting can be maintained and if general confidence exists regarding residential property values in the district."

Facilities for families, attractive physical setting and confidence in values notwithstanding, a deconverted house may stand cheek by jowl with a building of the same size which, as a rooming house or set of substandard flats, will sell as an "income property" for up to twice the price of its neighbor, though assessed and taxed at little more. The average family cannot compete with the intending rooming house operator and the average family is by no means encouraged to buy an older house. Only a newly constructed house can be obtained under the National Housing Act provisions with low down payment, long-term insured mortgages. The resulting anomaly is that one income will finance a new building in the suburbs but four, five or more are needed to carry (with renovations) a sound building in the center of the city. If inner residential districts are to have the leaven of families with children, and the overcrowding or abuse of essentially sound properties is to be prevented, the federal government's new-house financing terms should be extended to cover old houses. This would be particularly appropriate, in the Association's view, within older city areas which have undergone thorough planning studies and have gained as much, if not more, stability than have many suburban areas.

Drayton Bryant of the Philadelphia Housing Authority, in a recent talk to Torontonians, suggested that a district which is liable to panic when changes occur is on the verge of blight. Annex people have learned what it is to be threatened by change, and although the population itself has changed greatly in composition through the years, the Annex Ratepayers' Association (with its membership reflecting the changes among residents) has proved to be the mainstay at crucial periods in the life of this small but vital portion of Metropolitan Toronto.✦✦✦

L'APPRENTISSAGE FACE À L'AUTOMATION DANS L'INDUSTRIE DE LA CONSTRUCTION

par M. Guy Desbarats

Le sujet que je traiterai plus bas n'est qu'une tentative de prédiction des effets de l'automation sur les métiers de la construction, ainsi qu'une formule de recommandations sur les nouvelles exigences des programmes d'enseignement pour l'entraînement des apprentis dans l'industrie de la construction.

Avant de faire les recherches que ce sujet complexe exige, et pour choisir les meilleures contributions que je pouvais fournir avec l'expérience que je possède dans le domaine, j'ai tenté d'isoler les techniques précises par lesquelles le travail des architectes de nos jours peut influencer les besoins de l'industrie de la construction, surtout pour les employés specialisés, et dans l'ensemble présenter la valeur stratégique de l'architecte dans cette industrie. Une des premières techniques qui me vient à l'esprit a rapport à l'apparition des murs-rideaux métalliques qui ont déclenché une série de réactions, influençant à divers degrés l'industrie de la construction; et tous ces effets n'ont pas encore été ressentis. Par exemple: divers projets actuellement à l'étude exigent des murs entièrement préfabriqués de composition plastique synthétique — donc, de nouvelles techniques exigeant de nouvelles compétences. Mes propres excursions dans le problème tout à fait spécial du dessin de l'habitation m'ont aussi convaincu que si des changements radicaux sont sur le point de se produire ou doivent se produire, les architectes seront certainement parmi les premiers à les propager.

Mes sources principales de renseignements sur l'automation me viennent des bibliothèques de l'Université McGill de Montréal, en ce qui concerne particulièrement l'architecture, le génie, les sciences économiques et sociales.

Il a été dit que la révolution "scientifique" à laquelle nous faisons face présentement se compare à la classique révolution industrielle tel un "sputnic" à une charrue de bois. Et la technique qui s'associe la première à cette révolution scientifique est l'automation. "L'automation" est quelquefois définie comme étant un "rendement automatique" ou "l'exécution d'une opération avec une routine tout à fait mécanique, laquelle rend possible l'opération complète ou une partie de cette opération sans aucune assistance extérieure"; mais il y a autant de définitions qu'il y a d'experts dans la matière.

L'automation donc, peut être définie comme étant la continuation du procédé de mécanisation, lequel a commencé dans l'industrie il y a environ 200 ans. Pour comprendre la place de l'automation dans l'industrie de la construction, il est nécessaire de connaître son expansion dans l'industrie en général. Nous pouvons dire dès maintenant qu'il n'existe pas d'usine entièrement automatisée dans le moment, c'est-à-dire une usine dans laquelle les recherches, la préparation des plans et des dessins préliminaires, les spécifications, les prototypes, le calculateur central des opérations et la production mettent pleinement à profit l'aide électronique dans toutes les opérations, à partir de l'entrée du matériel brut en manufacture, de l'entreposage jusqu'à son expédition. Lord Halsbury, autorité britannique bien connue en technologie, dit: "que nous devons encore attendre une autre génération d'industries avant de connaître les résultats apportés par l'automation". Par là, je suppose qu'il veut dire une période d'environ 50 ans, mais je crois sincèrement que ce sera bien avant cela, tout particulièrement en Amérique du Nord. Généralement, à peu près toutes les indications recueillies jusqu'à ce jour démontrent que les effets principaux de l'automation ne s'exerceront pas directement sur la réduction du nombre d'ouvriers, mais plutôt sur le perfectionnement accéléré de la force du travail.

Pour citer M. B. Lockspeiser, secrétaire du Ministère des Sciences et des Recherches en Industrie

de Grande-Bretagne: "la solution des problèmes complexes de la technique et la définition du procédé d'opération inhérent aux nouvelles méthodes de travail, ne relèvent pas nécessairement de la machinerie, mais de l'usage que nous faisons de nos ressources humaines et en particulier *de l'entraînement que nous nous proposons de donner*". L'automation ne fera pas des robots de nous tous. Au contraire elle demandera des connaissances plus étendues, une plus grande habileté et un plus haut degré de compétence, aux ouvriers et à la direction.

De nos jours, l'automation semble être adoptée par les firmes relativement modestes mais spécialisées, surtout chez les sous-traitants des grands manufacturiers. Examinons de plus près l'industrie de la construction pour voir où elle se place, face à l'évolution scientifique et à l'automation, son prophète.

Le périodique "Fortune" décrit l'industrie de la construction sous le titre de l'industrie que le capitalisme a négligé. Ceci semble cependant très difficile à comprendre, lorsqu'on regarde le bilan de l'industrie au Canada, actuellement évalué à sept milliards de dollars par année, ce qui représente 1/5 de la production nationale brute. En considérant l'automation dans ses effets internes sur l'industrie de la construction, je cite d'une revue anglaise: "Il est vrai que la mécanisation et le besoin d'énergie marchent de pair avec l'automation, mais cette automation semble être ralentie par la pénurie de techniciens et d'hommes de sciences". L'évaluation de la nécessité d'un tel personnel n'a pas encore été faite dans le domaine de la construction. Pour le moment, le besoin essentiel et urgent est de déterminer le genre de programme éducatif à donner, de trouver les professeurs et commencer cette éducation dans le plus court délai possible."

Poursuivant l'étude des effets de l'automation dans la structure interne de l'industrie de la construction, je trouve qu'en Amérique du Nord certaines applications, quoique limitées, sont déjà effectives; par exemple: la machine automatique à commande électronique pour planter des clous est maintenant employée par plusieurs manufacturiers américains de logements préfabriqués. Cette machine peut être employée autour des portes et des châssis dans des mesures préalablement définies et suivant un tracé et des modèles déterminés. Cependant, de tout ce que nous avons dit jusqu'ici, l'automation semble s'implanter principalement dans les bureaux d'administration et des dessinateurs de l'industrie de la construction, c'est-à-dire de l'industrie qui se borne à la définition traditionnelle de manoeuvre en chantier. Dans le vaste champ des industries connexes qui représentent le bloc principal de l'industrie de la construction dans son sens large, et qui incluent tous les fournisseurs, la transformation se poursuit activement: la sidérurgie dépense une grande partie de ses ressources pour la mise au point de sa production automatique. Il en est ainsi dans l'industrie du bois, de la pulpe et de la planche murale au Canada. Et selon ce que nous avons vu précédemment, il paraît certain que c'est dans cette partie de l'industrie de la construction que l'automation prendra rapidement son plus grand essor.

On sait par tradition que la main-d'oeuvre forme la partie primordiale de l'industrie de la construction. C'est là le principal problème. L'appréciation de l'automation à ses différents niveaux et dans ses nombreuses sphères est utile dans l'étude des différents champs de la construction, lesquels semblent encore éloignés de l'automation. Il est donc nécessaire à ce point de faire la distinction entre l'industrie de l'habitation, l'industrie de la construction générale et celle communément appelée la grosse construction industrielle. Les différences entre la quantité de travail fait sur place et celui fait par le mode de préfabrication sont marquées entre ces trois catégories de construction.

L'importance de l'industrie de l'habitation est enfin reconnue et les données statistiques lui prédisent un essor qui augmentera sa valeur à 50 milliards de dollars au cours des 15 prochaines années. Aux Etats-Unis, 50 p. 100 de la production de l'industrie de l'habitation se compose de maisons préfabriquées en partie ou en entier. Le pourcentage des données statistiques canadiennes n'est pas aussi élevé, car 4 p. 100 seulement du total de la production est préfabriquée. Aucune statistique comparative n'est

actuellement fournie sur les logements préfabriqués assemblés sur les chantiers; quelques industries importantes dans ce domaine sont établies à Calgary, et la plupart des manufacturiers importants du Canada font des changements rapides en ce qui concerne la préfabrication des murs-châssis, des sections de murs avec portes, des cloisons, des armoires de cuisine, des toits, et même plusieurs font préparer la charpente d'avance, là où il n'y a pas de pénalité pour ce faire. Dans le grand Nord canadien, le besoin d'habitations a dû se résoudre à une préfabrication totale qui s'avère déjà plus poussée que n'importe où au pays. C'est dans ce territoire que l'on fait de nombreuses expériences et recherches prévues par nos gouvernements et nos universités. Nous pouvons donc dire qu'en premier lieu la mécanisation et ensuite la fabrication font un pas très rapide dans l'industrie de l'habitation au pays.

Nous remarquons que la récession générale ou la dépression ne semble pas avoir affecté les corps de métiers dans l'industrie de la construction préfabriquée aussi sévèrement que dans l'industrie en général. Nous pouvons conclure, je crois, que dans le secteur de la construction d'habitations, les employés peuvent s'attendre à des changements radicaux, quant aux habitudes de travail et d'embauchage, principalement lorsqu'il s'agit d'emplois spécialisés dans les manufactures, — cela du moins pour un certain temps.

Dans l'industrie de la construction en général, le développement vise en majeure partie l'usage des éléments constitutifs préfabriqués. Ces éléments constitutifs étant fabriqués sur le chantier, à l'usine ou même dans un emplacement particulier pour les projets d'importance: telles les poutres du pont Champlain. En d'autres mots, l'industrie a atteint approximativement le quatrième stade de l'industrialisation dans sa course vers l'automation générale. Nous savons aussi qu'en Russie il y a plusieurs milliers d'individus employés exclusivement aux recherches dans le domaine de la construction (nous n'en avons que quelques centaines). Je n'ai cependant pas réussi à obtenir les données statistiques se rapportant à la mécanisation dans l'industrie de la construction en général au Canada, (en dehors de la maison d'habitation) et je ne peux conclure qu'en terme général, qu'il y a une forte augmentation dans l'usage de l'équipement mécanique sur les chantiers.

Selon M. H. Peter French, directeur du National Federation of Building Trades Employers of Britain, "l'industrie de la construction est probablement l'une des industries les plus prodigues et les plus inefficaces".

Regardons de plus près la situation de la main-d'oeuvre elle-même, dans l'industrie de la construction. Dans le contexte présenté plus haut, nous avons dit que la main-d'oeuvre s'est souvent inquiétée des dislocations qui peuvent la frapper par l'introduction de méthodes dynamiques dans la technologie de la construction, et nous avons tenté de démontrer que ceci n'est pas inévitable, que le progrès de l'industrialisation sont à l'avantage de la société par la permanence d'emploi et l'élimination de l'insécurité traditionnelle de l'industrie de la construction. Et c'est à la lumière des changements dans l'industrie relatifs à la main-d'oeuvre que nous devons maintenant considérer la question principale, soit l'entraînement dans les métiers de la construction

Voyons ce que les éducateurs ou ceux qui sont affectés à l'entraînement de la main-d'oeuvre dans les métiers ont à dire sur cette situation et quelles sont les tendances dans l'éducation. Le Dr Julius Stratton, président du M.I.T. dit:— "Le M.I.T. doit devenir l'exemple par excellence dans un âge où la science et la technologie sont devenues les forces dominantes de la société". Et le M.I.T. est un des rares établissements où les recherches dans la construction se poursuivent à un niveau scientifique aux Etats-Unis. En Grande-Bretagne, les architectes ne font que commencer à étudier la position qui leur revient dans l'industrie de la construction et parlent aussi d'un entraînement conjoint pour toute l'industrie en général. De plus, le niveau d'âge scolaire est augmenté et il est même à prévoir qu'une certaine forme d'éducation postscolaire deviendra obligatoire. Les rapports de Grande-Bretagne se résument comme suit:— *premièrement* — main-d'oeuvre de compétence diversifiée; *deuxièmement* — des pro-

jets de recherches scientifiques doivent être entrepris pour établir la nécessité impérieuse de la compétence par une ré-évaluation des travaux à pied d'oeuvre et des nouvelles fonctions dans l'industrie de fabrication. *Troisièmement* — une main-d'oeuvre flexible est requise. *Quatrièmement* — l'emploi à l'année longue est essentiel dans cette industrie. *Cinquièmement* — l'insécurité traditionnelle dans l'industrie de la construction doit être éliminée. C'est donc exiger beaucoup d'une main-d'oeuvre déjà établie depuis longtemps et dont le programme d'entraînement est solidement tracé, mais nous devons le faire ici au Canada, comme il faut le faire dans d'autres pays.

Comment peut-on analyser les effets de ces exigences lorsqu'elles sont appliquées aux cours d'études des Centres d'Apprentissage de la construction? Nous pouvons commencer par dire que l'industrialisation de la construction, et plus particulièrement de la construction d'habitations, n'est pas aussi avancée dans certaines régions du Canada qu'elle l'est aux Etats-Unis, en Grande-Bretagne ou en Russie; dès lors nous verrons les réactions de ces changements dans ces pays avant que ces modifications deviennent absolument nécessaires ici. Cependant, une idée générale de l'échantillonnage de la main-d'oeuvre dans l'industrie de la construction peut être obtenue en regardant les statistiques d'emploi dans le passé et à l'heure actuelle dans une région comme Montréal, par exemple.

En 1931, les métiers traditionnels de menuisiers, maçons, plâtriers et peintres employaient 71 p. 100 de la main-d'oeuvre de l'industrie de la construction, et les nouveaux métiers d'électriciens, plombiers, 19 p. 100. En 1960, l'enregistrement aux cours dans le Centre d'Apprentissage de Montréal a été exactement de 71 p. 100 pour l'électricité, la plomberie, le chauffage, la soudure et la réfrigération, et la balance de 19 p. 100 pour les charpentiers-menuisiers, les maçons, les peintres et les plâtriers, (nous n'avons pas inclus les opérateurs de métal en feuilles dans aucun des chiffres). Il est donc évident qu'un mouvement révolutionnaire est en voie de formation même dans le vieux Montréal, et il est clair qu'en examinant les cours d'études donnés dans chaque métier, et enseignés au Centre d'Apprentissage de Montréal, qui, je crois, représentent l'attitude générale à travers l'Amérique, les charpentiers, menuisiers, les maçons, les plâtriers, les poseurs de tuiles et peut-être les peintres ont un besoin urgent de réétudier la définition de leurs métiers.

Il serait trop long ici, et je ne me sens pas toute la compétence nécessaire pour fournir des recommandations détaillées sur les programmes d'étude pour chaque métier de la construction en face des problèmes de l'automation.

Toutefois, en guise de conclusion, permettez-moi de suggérer à tous ceux intéressés de près ou de loin aux programmes d'apprentissage que des comités soient formés dans l'avenir immédiat pour étudier le champ d'activité de chaque métier dans l'industrie de la construction et de faire les recommandations nécessaires afin d'orienter les cours d'étude vers les exigences nouvelles de la technologie.

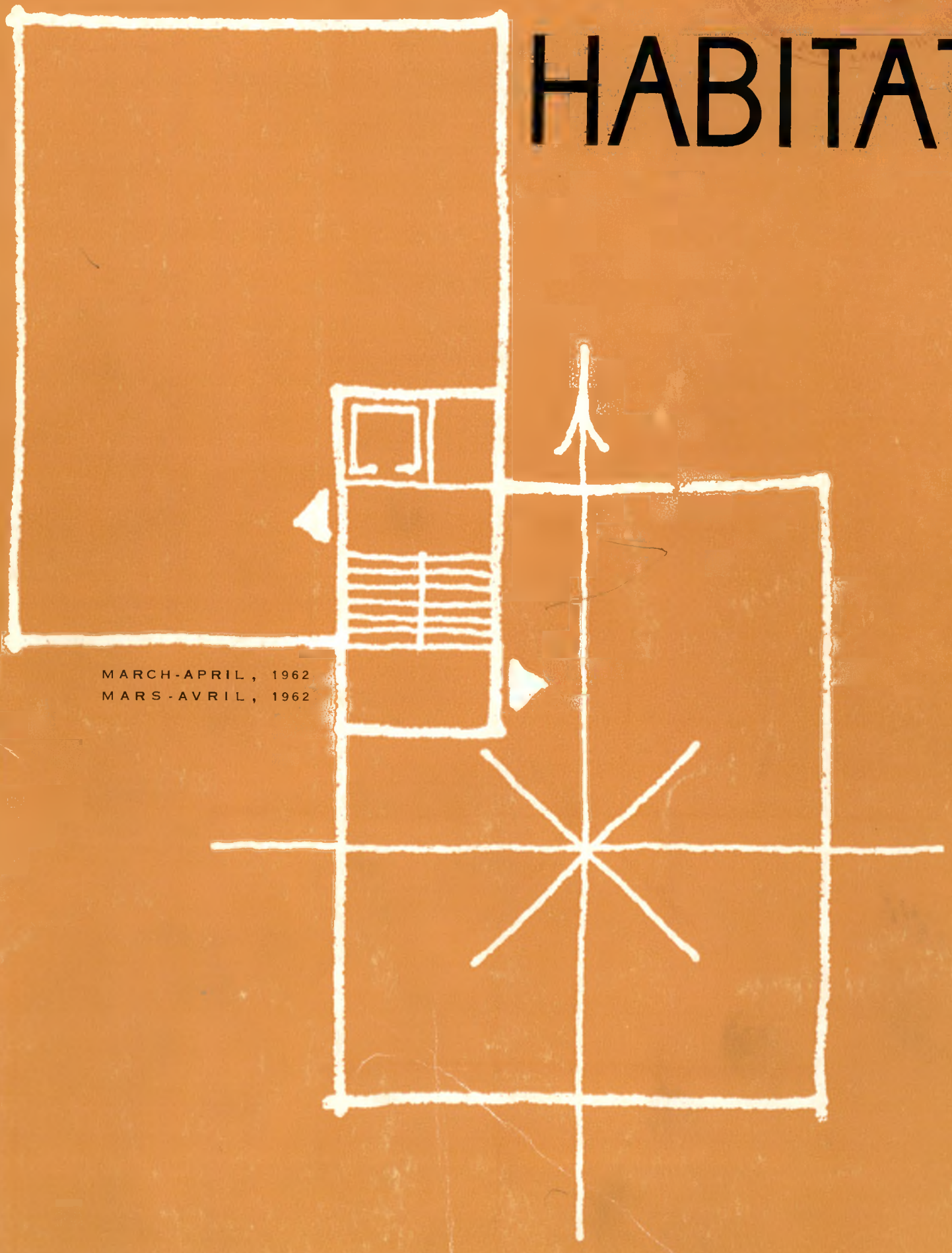
Accumulez les idées, prenez le temps nécessaire et réservez l'argent indispensable pour qu'un tel comité puisse atteindre ses fins. Il aura certainement une longue et dure tâche, mais l'importance et la force des métiers de la construction à travers le Canada en font un besoin urgent et nécessaire pour le bien futur de tous. Un comité spécial tel que je le suggère est un outil indispensable pour aider à établir les positions maintenant et pour préparer les plans futurs. La tâche est bien au delà des forces d'une seule personne.✦✦✦

GABY

M. Guy Desbarats est diplômé de l'Ecole d'Architecture de McGill et exerce sa profession à Montréal. Après un voyage d'études en Europe, il entreprend une étude sur les problèmes de l'habitation collective, grâce à une bourse de la SCHL. De 1953 à 1959, il établit un laboratoire de construction à McGill, y enseigne à titre d'assistant spécial et agit comme conseil à des cours de laboratoire d'architecture conduits par M. H.-T. Fisher, aux Etats-Unis.

CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

HABITAT



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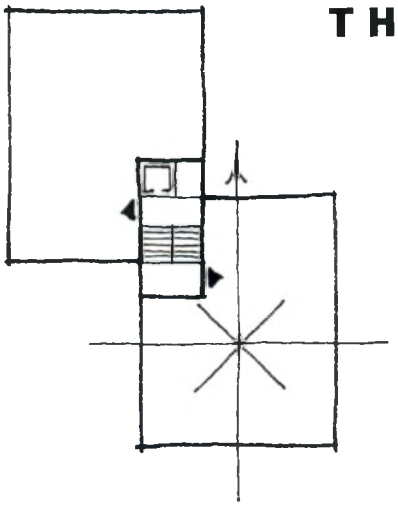


THE POINT-BLOCK CONCEPT

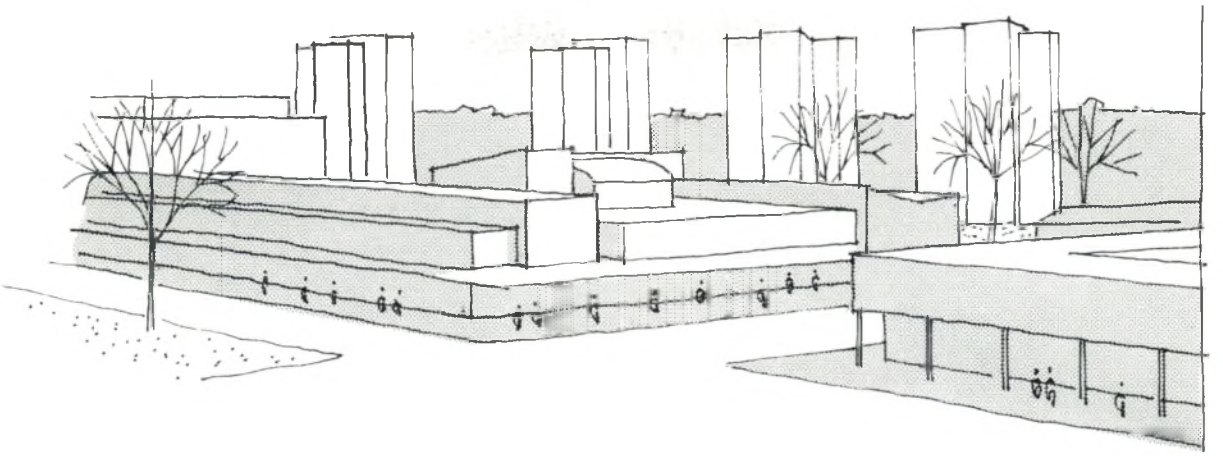
by Norbert Schoenauer

In the past, dwelling forms have evolved slowly. Housing throughout the history of mankind underwent a gradual process of improvement always molded by a universal acceptance of tradition and adapting to the prevailing climate and living conditions; with time, the fourth dimension of our perceptive abilities, playing a dominant role in the reciprocal relations between man and his environment. Moreover, the individual played an active part in the formation of his own abode; hence housing developments have been characteristically limited in scope and small in scale.

It is indisputable that the formative processes of the past do not cater to the character of our new technological society; present living conditions change so rapidly that we cannot await a gradual adaptation nor a continual evolution of our dwelling forms in order to suit the demands of our age. Climate is the only formative force which still has to be reckoned with in the old way, but with the perfection of the artificial climate within our dwellings, even this force lost some of its initially uncompromising impact. Our new mode of life is forcing us to search consciously for better dwelling forms and the large scale operations replacing the individual home builder's activities enable us to realize our new ideals within the comprehensive housing development projects.

The point-block concept is a new approach to multi-family housing, employing detached tower-like structures several storeys high. This concept is the result of conscious search for a new housing form, which evolved from an endeavor to produce a design that enables every apartment to have windows facing all four points of the compass. The solution of this problem took the form of two tiers of apartments linked by a common circulation core. It soon became evident, however, that the new design was only economically feasible if the structure did not exceed four floors in height. By increasing the number of floors, elevator service became a necessity, and the subsequent costs were relatively high per square foot floor area unless the size of the apartments or alternatively their number per floor was considerably increased. From these considerations then arose the prototype of the point-block, consisting of four apartments per floor, surrounding a compact circulation core.

We find the cradle of the point-block concept in Sweden. The first housing project, known to the writer, using this building type was designed by S. Frolén, and featured six-storey structures with five apartments per floor—two bachelor units, two one-bedroom units, and one luxury dwelling facing the grand view. During World War II, shortly after the erection of Frolén's "punkthus", the City of Stockholm arranged a housing and town planning competition with the objective of evolving projects for good house and flat types for the outer residential areas. The approach to this competition was unique inasmuch as there were no prescribed stipulations for building styles, building dimensions or even number of rooms required per dwelling unit. Instead, the participants received only instructions regarding the ten different family types for which these dwellings were to be designed, certain minimum hygienic standards, and some requirements for household equipment. Submissions for the above competition included the point-block housing type next to other dwelling forms and solidified the position of this new concept. From here on point-blocks, occupying a very important place in the numerous contemporary residential neighborhoods, made their appearance frequently in the Swedish urban scene.



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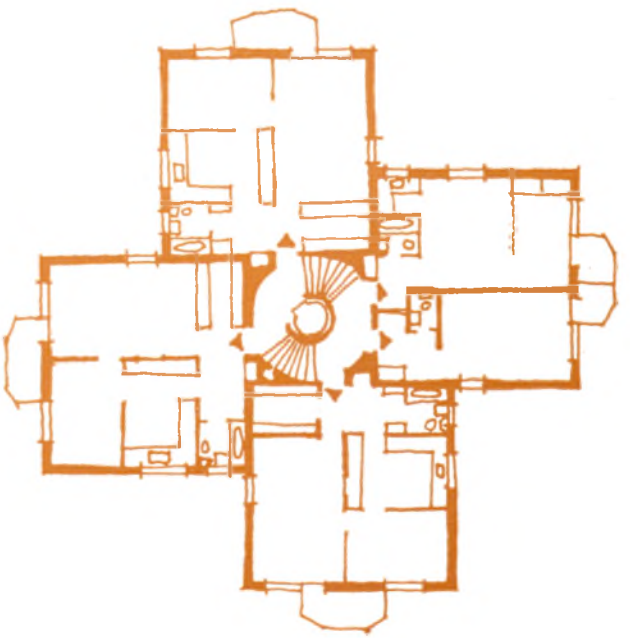


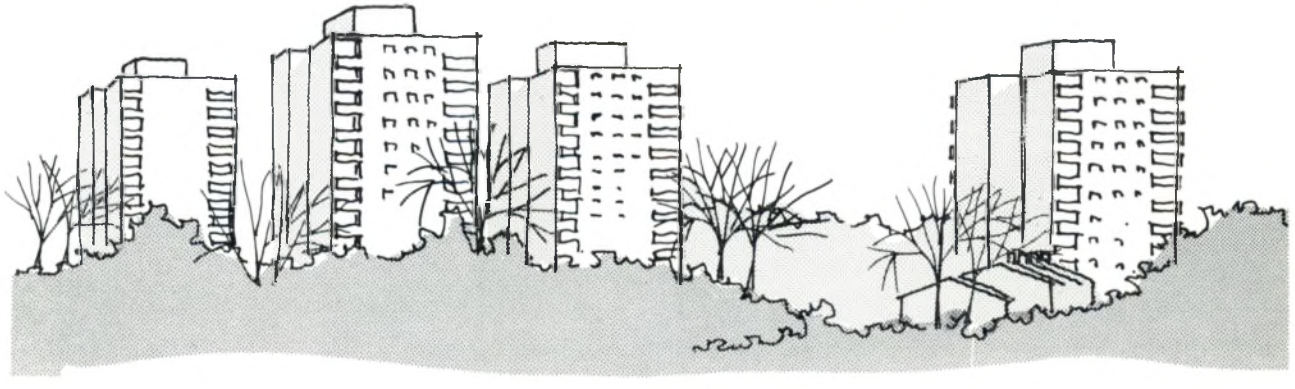
Acceptance of the "punkthus" idea also followed suit in other countries. For example, two Danish architects, Mogens Irming and Tage Nielsen, won a major housing competition in 1944 with a design featuring point-blocks as the dominant building type for a large development project now constructed, the Bellahoj Housing Estate in Copenhagen. Similarly, France, Germany, Italy, Switzerland and many other countries on the European continent adopted the point-block concept with remarkable success.

Of greater interest to Canadians are the numerous point-block developments of Great Britain. Designed by the London County Council's architectural office, they appeared in 1951 as three point-blocks forming part of the first major high-density mixed development scheme. Thus, point-blocks contributed to the accepted notion that the 1950's could be referred to as the British era of the tall blocks of flats. By no means has this era reached its climax; on the contrary, it seems to be only at the beginning of its evolution.

Possibly the most noteworthy and also best known L.C.C. point-block development is found in Roehampton; not only is this 100-acre site developed comprehensively, but it also reflects the interesting evolution of the point-block through its early appearance in the Portsmouth Road section and the more recent one at Clarence Avenue. The practice in building eleven-storey point-blocks in the London area has set the pace for the rest of the country.

Finally, the important role of the U.S.A., with its skeleton building construction heritage, has to be emphasized since that country contributed indirectly many underlying principles to the formation of the point-block concept. Indeed, it is very tempting to say that this new building type originated in the U.S.A., since there must be scores of tall apartment structures in the larger cities of the North American continent which were erected prior to the Second World War and which could be called point-blocks. However, if we adopt the notion that the point-blocks are consciously designed housing units in residential neighborhoods, and governed by preconceived popu-

Alton Estate, Roehampton,
Architect's Department,
London County Council.



lation density limitations rather than speculative maximum land use, then credit must be given to the Swedes for the inception of this new housing type.

During more recent years, many residential areas featuring point-blocks were designed in the U.S.A. Perhaps the best known early example is Mies van der Rohe's Lake Shore Drive, Chicago, an apartment house development facing Lake Michigan. The latest proposal utilizing the point-block concept is an exciting design for the Santa Monica Ocean Front redevelopment area of San Francisco showing a well-conceived marriage between low and high-rise dwelling structures.

After the brief description of the point-block concept in different parts of the world, it now becomes necessary to analyze the physical advantages accruing from these new housing types. Let us compare therefore the two diagrams "A" and "B", the former portraying the essential features of a point-block layout and the latter depicting features of a typical conventional slab apartment block.

A close examination reveals five major advantages inherent in the point-block concept:

1. The circulation core of scheme "A" is smaller than that of "B". The stairway and the elevator areas are equal in both cases, but because of the close proximity of the four dwelling units in "A", the corridor space is considerably reduced. This fact is revealed by the smaller cross-hatched public area of the point-block apartment. The above factor not only brings about savings in costs, but also renders the apartment units more desirable since entry to the different dwelling units is gained from the smaller and more intimate public space. In contrast, slab apartments have, generally, impersonal and unsightly long hotel-like corridors.

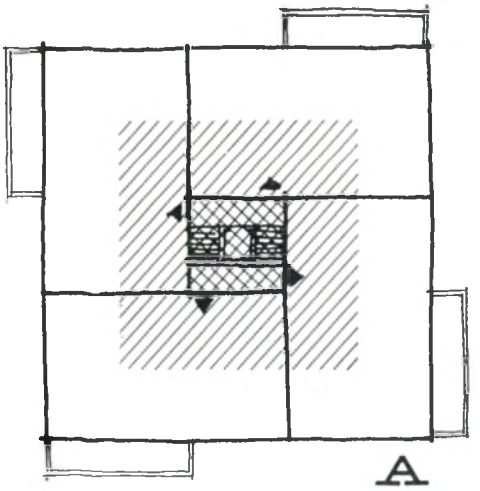
2. The proportion between well-lighted and dark floor areas is more favorable in scheme "A". Comparing the shaded areas in our diagrams with the extent of well-lighted floor areas, the advantages offered by point-block developments must be recognized. Since areas where light penetration is subdued are only suitable for

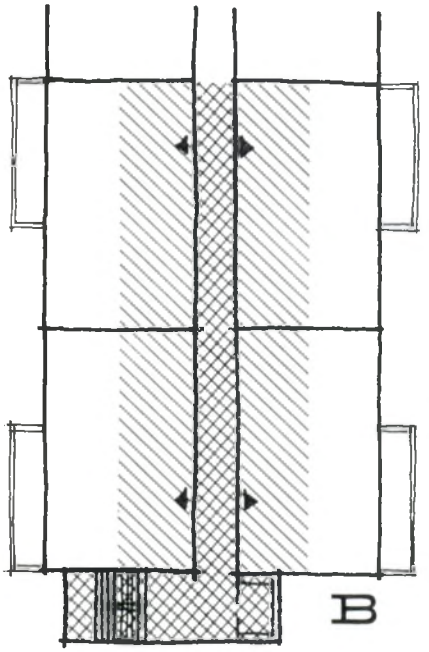
secondary rooms, less dependent upon daylight, it is evident that scheme "A"'s characteristics reflect the requirements of a dwelling more satisfactorily. The unfortunate practice of extending habitable rooms into the shaded area of the dwelling unit is greatly invalidated with the point-block concept.

3. The point-block is a detached structure; consequently, each apartment has at least two exposures towards the sun. This advantage in northern sections of our hemisphere where sunlight is at a premium, is invaluable; furthermore, two-sided orientation of the fenestration is followed by the advantage of cross ventilation, a factor which has little importance during the winter months, but conversely has some merit in the hot summer. However, it could be argued that effective mechanical ventilation in our day and age makes this aspect somewhat less important.

4. Closely related to the characteristic of two-sided orientation of each apartment unit in scheme "A" is the notion of privacy with respect to balconies. Having four apartments per floor, the typical point-block may accommodate one balcony on each side and thereby assures each dweller complete privacy. A similar arrangement is, of course, physically impossible with the slab apartments unless the expensive solution of recessing all balconies completely within the building is used.

5. Finally, the last attribute of the point-block concept derives from its slender structure. This feature enables the siting of several tall blocks of flats without visual disruption of the natural topographical environment; moreover, the numerous apertures between building structures will prevent a total blockage of any vistas. Compared to slab apartment blocks, the tall tower-like structures have only a narrow shadow sweeping the ground with less ground area in perpetual shade. This fact is beneficial for landscaping as well as recreational activities in the outdoors.



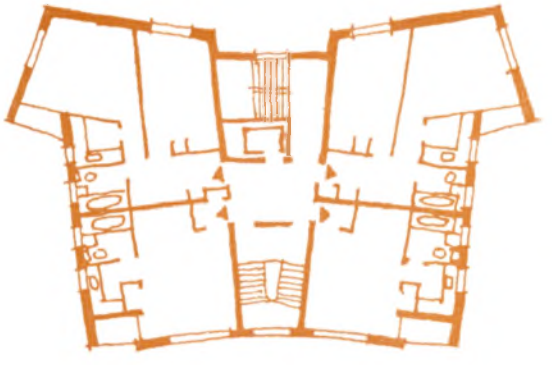


Following the enumeration of the advantages, it is imperative to outline also any disadvantages of the point-block concept. The shortcomings can be summed up in one sweeping statement, namely *increased building costs.*

It is an undeniable fact that greater expanse of outside walls would bring about an increase of cost for building construction and maintenance, the latter

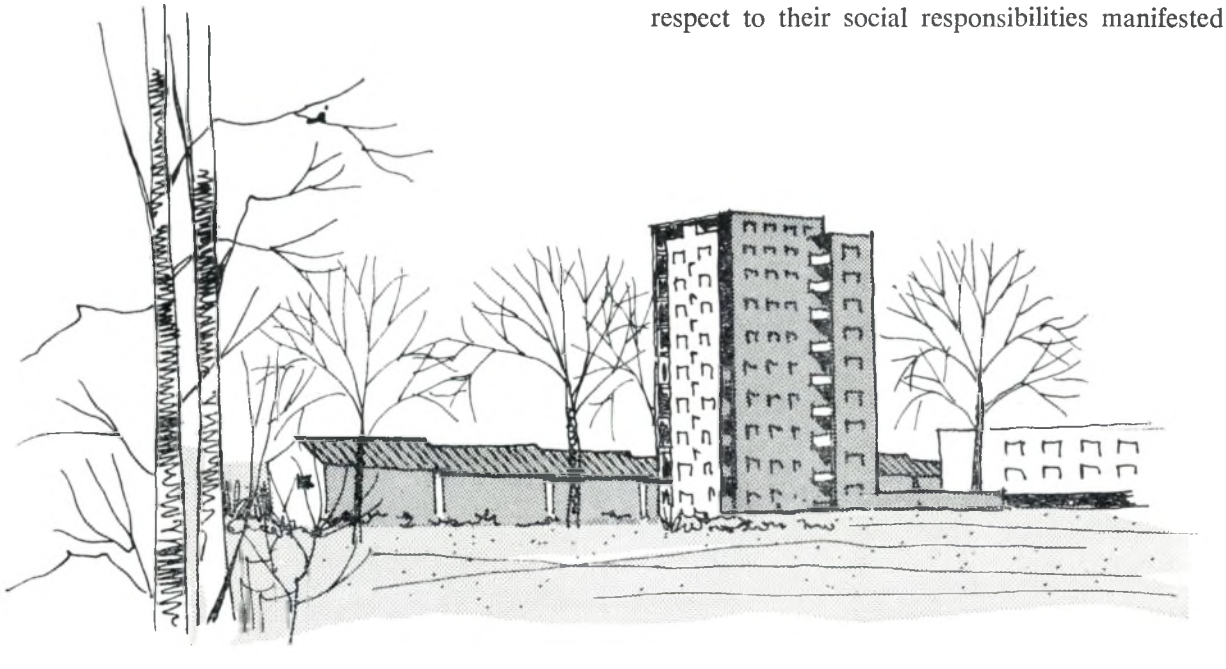
through added heat loss. Nevertheless, it has to be borne in mind that for these additional expenditures, certain advantages are derived and it is conceivable that many a dweller is willing to outlay slightly higher rent in order to benefit from the added freedom of view, sun and air.

There is, however, one grave factor which completely handicaps the economics of the point-blocks if erection is contemplated in Canada. This factor is contained in the fire regulations of this country where the building code prescribes that every tall structure have two elevators and two staircases. These requirements are not based upon the number of occupants, but rather upon the number of storeys. In all fairness, it is true that similar regulations were, and still are, in existence in Great Britain, but there a reservation was made by L.C.C. permitting it to deal with each case on its individual merits. Consequently, a great number of recent point-blocks have been erected in the British Isles with only one set of stairs and one elevator. In Sweden, the country where point-blocks originated, only one staircase and one elevator have been employed from the start without a single mishap ever recorded in its two decade history. The building authorities of the above two countries cannot be accused of being irresponsible, since both nations are distinguished with respect to their social responsibilities manifested in



"The Lawn", Harlow,

Frederick Gibberd.



every aspect of life. It is not suggested by the writer that safety should be dealt with light-heartedly, but that our building code should be re-evaluated by a commission similar to the "British Standards Code of Practice Committee".

It is not within the scope of this essay to account for the different construction methods employed in the erection of these new building types. Nevertheless, it is important to outline briefly the findings of the architects and the contractors involved with the building of these tall structures. In the U.S.A., it is commonplace for the structure of point-blocks to be similar to that of office buildings because of the prevalent skeleton tradition. Much more interesting, however, are the monolithic construction methods employed in Great Britain and the European continent. The perfection of this new building technique is attributed to improved concrete mixing as well as the handling process and its widespread popularity derives from the savings accruing from the employment of a great amount of unskilled labor in comparison to other building methods. Since housing units have invariably permanent partitions, the designer is naturally tempted to utilize these building elements structurally; conversely, in office buildings, where a flexible layout is at all times mandatory, the skeleton system is still preferable.

From the criteria of plan form, one can distinguish two types of point-blocks, those having simple geometric shapes such as squares, rectangles, circles and even triangles and those of composite forms represented by the "Y", "T", "U", "H", cruciform, star and cluster shapes. In general, the simple shapes are usually employed for those structures which house smaller apartments and composite forms conversely for larger dwelling units in order to prevent a large core area.

Apart from the singular point-block in centrally located residential areas, this new building type has been employed in the following three urban settings: as a vertical element or accent among low buildings similar to Gibberd's point-house in the New Town of Harlow; in groupings within central urban areas exemplified by Mies van der Rohe's 860 and 900 Lake Shore Drive, Chicago; and as point-block neighborhoods in outlying residential areas such as Backstrom and Reinius' Danviksklippan development in Stockholm. The latter development type can, of course, be part of a mixed residential development where a proper balance is struck between low and high-rise buildings as found in the before-mentioned Roehampton Alton Estate development, Portsmouth Road section.

The point-block concept should not be thought of as a universal panacea brought to light in answer to our housing dilemma apparent from the recent "Inquiry into the Design of the Residential Environment". But this new dwelling form, with its inherent attributes, can fulfil certain needs which other housing forms are unable to satisfy. Let us not abandon our conventional housing traditions, but rather augment them with new housing types such as the court-garden house and the point-block, all of which cater to a specific group of people whose requirements are not met at present. This worthwhile consideration, if implemented, would pay a handsome reward in alleviating the monotonous character of our new residential neighborhoods and the result would be a true community of mixed residential accommodation of which only one element is the "point-block".✦✦✦

Mr. Norbert Schoenauer, born in Hungary, studied architecture in Europe. After taking up residence in Canada, he continued his academic career with a post-graduate course at McGill University where he is now an Assistant Professor in Architecture. With the aid of a grant from Central Mortgage and Housing Corporation, Mr. Schoenauer, in conjunction with Stan Seeman, made extensive studies and compiled a book on the Court-Garden House which will be published this summer.

HOUSE AHOY!

PHOTOGRAPHS BY THE NATIONAL FILM BOARD.

Since the days of John Cabot many strange craft have plied the tricky coasts of Newfoundland, but even the most hardened mariner must stare popeyed at the sight of a complete house sailing serenely by on the open sea. The house, under tow by a fishing boat or two, is not the result of nature's fury creating a tidal wave, but is part of a province-sponsored project to bring many of the island's 1,300 outports to more central locations. In this way, the larger communities will be able to process the harvest from the sea and play a more active part in the province's changing economy.

Although some of the old folks hesitate to leave the villages where their ancestors have lived for generations, the attraction of better schools, modern power and water supplies, overland transportation links and increased social facilities has already spurred the move of 60 communities. Before all the moves are complete, more than a tenth of the province's population may be affected.

The neighborly co-operation instilled by hundreds of years spent sharing the dangers of the sea overcomes the physical problems of the move. Relying on the only power available in the outports—human muscles and ingenuity—removal must be backed by all the residents to receive the government allotment of $600 for each house relocated. The houses, as well as the stores and churches, are brought to the beach on rollers, buoyed with oil drums and sailed to the new location.

An old salt at Dover watches a Silver Fox Island house float into the beach.

Central Mortgage and Housing Corporation appreciates the magnitude of the task confronting the people of Newfoundland. During the war years, about 400 houses were constructed at Pictou, N.S., to house the workers employed by the shipyard. Upon the cessation of hostilities, many of the workers returned to their former towns leaving some of the houses vacant. In the meantime, the booming post-war economy had caught up with Stellarton and Trenton creating a housing shortage in those areas. During the years 1948-49, CMHC moved 100 houses over 15 miles of water to their new locations and owners. It was quite an undertaking.✦✦✦

Left, at high water a house is pulled into the shallows preparatory to skidding on to the beach over logs greased with cod blubber. No mechanical aids here but plenty of muscle power developed through years of hauling in the harvest of the sea.

Right, a welcoming committee of Dover children greet some new playmates.

Below, the house in the foreground has been set in position at its new location in Dover.
It was sailed over eight miles of open water from Silver Fox Island, Bonavista Bay.

ARAB INFORMATION CENTER

View of Beirut, the capital city of Lebanon, taken from the American University.

HOUSING IN LEBANON

by George Mina

Mr. George Mina has been associated with the oil refinery business in Lebanon for many years. He attended the Forty-Fifth Session of the International Labour Conference in Geneva accompanying the Lebanese Delegation as an Employers' Adviser and Substitute Delegate.

The first mention of the Lebanon may be found in cuneiform inscriptions as far back as the third millennium B.C. The word Lebanon comes from an ancient semitic term meaning white and is probably derived from the spinal mountain range, dividing the coastal plain from the interior, which in the dawn of history rose to majestic heights and was snow-covered for the entire year. Over the ages erosion has taken its toll and now only certain peaks have snow during a four-month period. On the coastal plain the weather is very salutary year round except for a short rainy season, while inland beyond the mountains, the climate alternates between a long rainy season and a very dry summer.

In modern times the country has served as the main channel for

the flow of Western ideas to the Arab East. To a large extent, this results from the numerous European and American schools, colleges and universities which are not only located in the main cities, but also in the most remote parts of the country.

Since World War II, Lebanon has been experiencing a problem which has become common to almost every country in the world—the increasing urbanization of her population. Although since ancient times, the cities of Beirut and Tripoli have been two of the largest trading centres on the Mediterranean, most of the manufactured goods of the country were turned out by village craftsmen working out of their own homes. After the war, the development of industry, both in and around towns has caused a complete change in the manner of living for a large segment of the population.

The mass migration of villagers into towns and industrial centres in search of a form of employment which would better their standard of living, caused a severe shortage of dwelling facilities. The previous system of welfare amenities in the urban areas became totally inadequate and it was necessary for the government to lay the groundwork of a plan to house the workers and enable a proportion of them to purchase their living quarters at low rates of interest. As a first step towards the execution of such a plan, the government purchased a number of parcels of land.

Unfortunately, before the housing scheme could be put into effect, two catastrophies occurred and the correction of the resulting havoc took precedence over any other form of public works. In 1955, a flood ravaged the northern district, including part of the City of Tripoli and, in 1956 a devastating earthquake leveled a good many houses in the central and southern districts.

The combination of these unexpected events left many thousands of persons without shelter so the government mobilized all its resources to provide accommodation for the homeless. A special branch known as the Department of Reconstruction was immediately organized. The sole function of this Department was to alleviate the suffering caused by the acts of nature and to provide housing with the least possible delay. The government levied special taxes to cover the cost of reconstruction and engaged the best architects and engineers to formulate building plans and work began immediately. Within a short space of time several thousand dwellings were completed and turned over to the homeless victims.

In the flood-devastated areas of the more populous north, three-storey buildings with two apartments on each floor were found to be the most practical type of habitation. In the more sparsely settled areas of central and southern Lebanon, where land values were considerably cheaper, a large proportion of the housing was single family dwellings.

This could be said to be the commencement of a public housing program in Lebanon. However, unlike the more normal system where rent is geared to income, the shelter was provided absolutely free to the tenants. But it was provided as a form of indemnification to compensate for the losses suffered by flood and earthquake and is not a precedent for any future program.

When the government's general public housing scheme is put into operation, it will probably take the following form; the government will subsidize the construction of dwellings in all parts of the country for needy persons and workers whose income is limited; the government will be responsible for the planning and the construction of such housing.

Although the public housing scheme has not as yet been activated, there are facilities in Lebanon for individual home ownership. After the war, private enterprise began the construction of large apartment buildings and some of these contained as many as 48 flats. These flats are sold to the tenants on long-term payments. In other instances, industrial firms entered into the same type of construction to enable their own workers to enjoy the advantages of home-ownership. Throughout the entire urban area of the country a great many large apartment blocks are under construction.

As stated previously, in the urban areas nearly all house construction is of the apartment type. In

A block of flats.
The last four floors are
still under construction.

Below, a village house
built of stone.

Right, Tripoli played a leading role
in the Crusades and is still
the site of the fortress of
Raymond St. Gilles,
Frankish Chieftain.
Here is a general view of
the residential quarter
with a jumble of
modern apartment houses.

One of the more elaborate family houses—the Villa.

ARAB INFORMATION CENTER

Lebanon, the cost of land has risen so sharply that it is practically impossible for a middle-class worker to purchase enough land to erect a separate house. Only in the villages are many single-family dwellings being constructed.

Throughout the country, house types differ in every locality both in structure and form. There are many factors which influence house types, but perhaps the most important is climatic conditions. This country, under the benign influence of the Mediterranean Sea, is blessed with lovely weather for the greater portion of the year. Consequently, the main characteristics of urban housing are big windows and large balconies or verandas. On the other hand, because of lower land and labor costs, housing in the villages is mostly of the bungalow type with a surrounding garden.

The use of wood for construction in Lebanon is almost negligible. It is confined to doors, shutters and wall cupboards. In the villages, houses are mainly of shaped white stones—the most common building material available. The roofs are of red tile which presents a very pleasing contrast to the rest of the structure. Apartment construction in the urban areas is in most instances cement blocks with reinforced concrete roofs. The foundation is a concrete shell extending about 13 feet underground thus supporting the building structure. The most common floor surfacing is colored concrete tiles although in some of the more elaborate buildings marble is used for this purpose.

In recent years, a great many villas have been built in the villages and summer resorts. The normal material is of well shaped hard stone and the roofs are of either red tile or reinforced concrete. These may be considered more of the luxury type of accommodation.

In general, house building in Lebanon is growing rapidly and although in the smaller villages people retain the old Lebanese architecture which embraces the arcade system, the tendency in urban areas and summer resorts is toward the development of modern architecture, strongly influenced by Mediterranean climatic conditions.✦✦✦

COMMENT LE CODE NATIONAL DU BÂTIMENT EST PRODUIT

Monsieur Lefebvre est chef du Service du traduction de la Société Centrale d'Hypothèques et de Logement.

par M. V. Lefebvre

Cet ouvrage de référence est un développement du Code National du Bâtiment originalement publié conjointement en 1941 par le Conseil National de Recherches et le ministère des Finances. Une édition complètement revisée fut publiée en 1953. Ceci est donc la troisième édition.

Le Comité Associé sur le Code National du Bâtiment est constitué d'un groupe d'environ vingt-quatre citoyens canadiens nommés par le Conseil pour un terme de trois ans. Ils siègent comme particuliers et non pas en fonction de représentants d'une organisation quelconque. La tâche principale du Comité est d'encourager l'uniformité des règlements du bâtiment dans tout le Canada. L'étude et l'amélioration soutenues constitueront toujours la part importante des travaux du Comité afin que le Code National du Bâtiment reste un document satisfaisant, contenant des règlements qui peuvent être adoptés ou mis en vigueur commodément pour application locale.

Le Comité Associé représente généralement toutes les principales phases du bâtiment au Canada. Parce qu'il incombe au Comité de s'occuper directement de la préparation et de la publication du Code, celui-ci devient un ouvrage indépendant. Seuls sont dévolus au personnel du Conseil les travaux nécessaires en matière technique et de secrétaire, lesquels sont tous exécutés sous la direction du Comité Associé. Ces travaux sont exécutés dans la Division même des Recherches en Construction, à laquelle sont référés les nombreux problèmes de recherches que l'emploi et la révision du Code suscitent continuellement. De cette manière les renseignements les plus récents sont mis à la disposition du Comité.

Le travail réel de préparation des nouvelles parties du Code, et de révision des parties existantes, est délégué par le Comité Associé à des comités spéciaux de révision. A ces comités siègent ingénieurs, architectes, préposés au bâtiment, et autres experts en matières techniques afin que l'ouvrage qui en résulte puisse représenter les pratiques contemporaines au Canada, interprétées au besoin pour établir les règlements minimaux dont le Code est constitué. Ces comités publient toujours un projet de nouveaux documents qu'ils préparent. Ces projets sont adressés à ceux qui s'y intéressent afin d'en recevoir les commen-

taires. Trois groupes consultatifs, sur l'incendie, la santé et la charpente, formés de membres représentatifs, gardent la teneur technique du Code à l'étude entre les révisions, et avisent le Comité associé sur les problèmes techniques.

Les commentaires sur l'emploi du Code ainsi que les améliorations à y apporter, seront toujours bien reçus; on peut les adresser au Secrétaire, Comité Associé sur le Code National du Bâtiment, Conseil National de Recherches, Ottawa. Si les personnes qui se réfèrent à cet ouvrage collaborent ainsi avec ceux qui ont travaillé à le préparer et à le reviser, on maintiendra ainsi le vrai caractère national du Code en l'affermissant, et il se développera pour devenir un manuel satisfaisant contenant les règlements désirables en construction, pour être employé par les municipalités et autres organismes au Canada.

Pour que le Code devienne un document réellement national, le Comité associé sur le code national du bâtiment s'est mis à la recherche d'un traducteur ou d'un groupe de traducteurs qui pourraient leur préparer une traduction et une présentation en français de l'ouvrage en question. Après enquête, on a demandé au traducteur de la Société centrale d'hypothèques et de logement de traduire le code abrégé à l'adresse des petites municipalités. Cette première traduction a semblé satisfaire les autorités du Comité après quoi une demande officielle fut faite au président de la Société centrale d'hypothèques et de logement pour que son traducteur considère la possibilité de traduire les 16 chapitres du Code national du bâtiment. En 1951, le travail fut amorcé et tranquillement, chapitre par chapitre, un premier projet de traduction fut ébauché. Cette première ébauche laissait d'innombrables points d'interrogation. Il fallait aller à la recherche de personnes généreuses qui voudraient se donner la peine de revoir avec le traducteur ces chapitres remplis de génie civil tels que la charpente d'acier, le béton armé et les calculs sur la résistance des matériaux. Fort heureusement il s'est trouvé un monsieur Robert David de l'Institut canadien de l'acier qui a passé de nombreuses heures à revoir et rédiger en français avec le traducteur, le texte sur la charpente d'acier. Le béton armé exigea de monsieur Sakalarios de la firme Letendre et Monti de Montréal, une patience inouïe et des heures d'explication avec le profane pour qu'il pût comprendre ce dont il retournait dans ce chapitre du béton armé. Monsieur Heitshu du Service d'inspection de plomberie du ministère du Travail de Québec a bien voulu revoir avec le traducteur le chapitre sur la plomberie pour s'assurer que les expressions et les traductions n'entraient pas en conflit avec le Code de plomberie de la province.

Il a fallu rédiger de nouveau tous ces chapitres et les soumettre encore une fois à la compétence de ces ingénieurs pour s'assurer que la traduction et la présentation en français n'allaient pas à l'encontre de l'esprit ni de la lettre du document en anglais. Tous ces efforts ne furent pas en vain parce qu'il en a résulté un grand bienfait au traducteur qui en a tiré un vocabulaire bilingue très étendu en matière de construction. Fort heureusement, toutes ces connaissances furent cataloguées dans un index alphabétique et on a invité le traducteur à songer, plus tard, à préparer un dictionnaire bilingue sur le bâtiment—travail qui sera entrepris dès que la présente révision du Code sera terminée.

Après avoir préparé une dernière rédaction des textes, ceux-ci furent soumis à monsieur Ernest Lavigne de l'Ecole polytechnique de Montréal qui a relu une dernière fois les textes français du Code. Lecture faite, monsieur Lavigne soumettait ses commentaires et suggestions qui ont fait l'objet de discussions et de recherches. Après quoi le texte finalement corrigé fut imprimé. Le dernier chapitre sortait des presses de l'imprimeur 30 mois après les premiers coups de bêche. La deuxième édition française du Code en 1961 ne représentait qu'un tiers du travail et du temps de la première édition. Mais le même procédé de double vérification fut appliqué. C'est un moyen d'assurer que le code français sera aussi précis et uniforme d'expression que possible. Il n'en reste pas moins que le traducteur a enrichi son vocabulaire technique qui lui est maintenant d'une très grande utilité dans son travail à la Société centrale d'hypothèques et de logement.✦✦✦

BRITISH HOUSING MEDAL AWARDS, 1961

The Minister of Housing and Local Government attaches great importance to the design and quality of new buildings in Great Britain. He therefore decided to start a new series of awards with the object of giving recognition to recent designs of outstanding quality and encouraging a generally higher standard of design in the country. The 1961 awards are the first in this series.

The Minister felt that although a great deal of attention had been given to the design of individual houses since the war, not enough had been paid to that equally important aspect of housing—layout and grouping. The scope of the 1961 awards was therefore limited to a group or groups of at least ten new dwellings on one site, completed between the end of 1955 and December 31st, 1960, and the main emphasis in judging lay on the interesting and attractive grouping of the buildings.

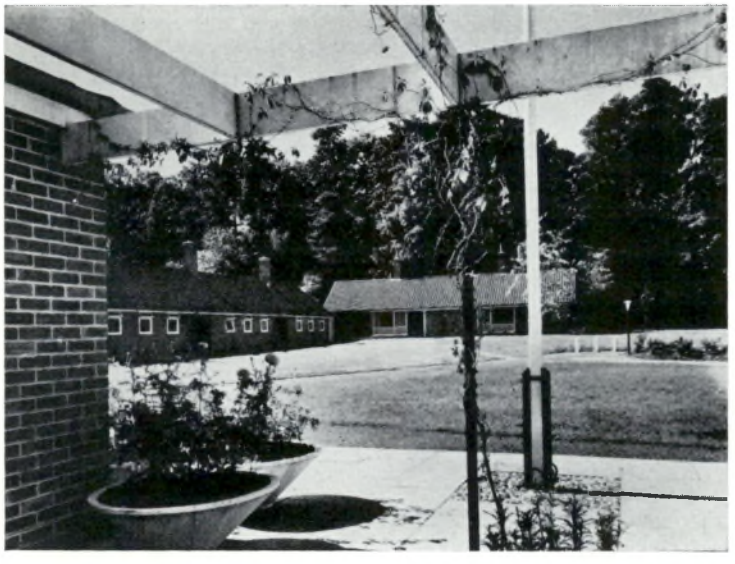
The awards have been made by the Minister on the recommendations of the awards committees in each of the four regions in England and in Wales appointed by him. The chairman and one of the members of each of the committees were nominated by the President of the Royal Institute of British Architects.✦✦✦

WALES URBAN, (Left)
Croes-y-ceiliog, Cwmbran, Monmouthshire.
Commissioned by Cwmbran Development Corporation.
Designed by: John West, A.R.I.B.A., M.T.P.I., Chief Architect.

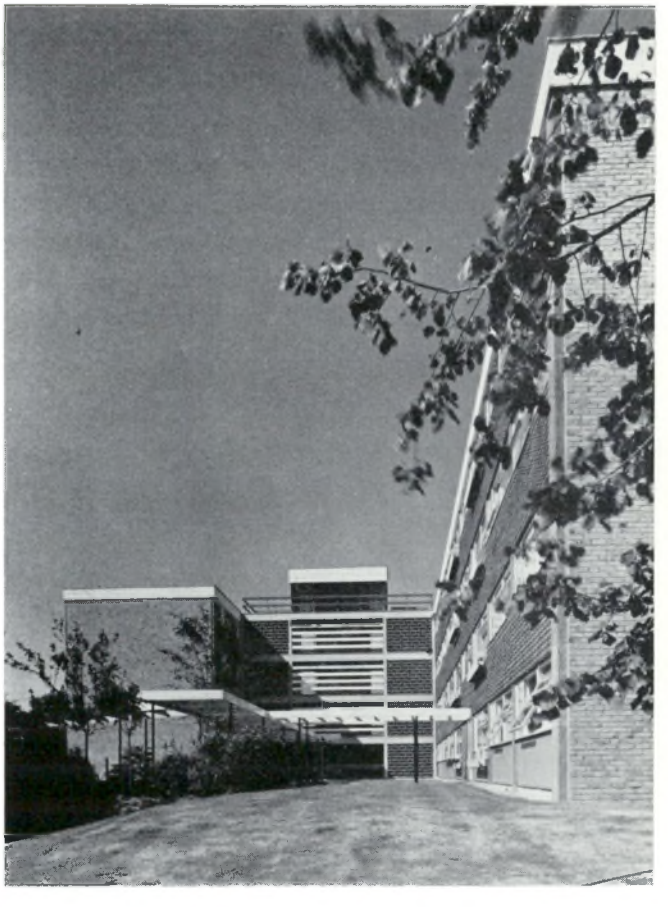
LONDON URBAN, (Right)
Munster Square, London, N.W.1.
Commissioned by: St. Pancras Metropolitan Borough Council.
Designed by: Edward Armstrong and Frederick MacManus, FF/R.I.B.A.

LONDON RURAL, (Left)
Church Road, Bergh Apton, Norfolk.
Commissioned by: London Rural District Council.
Designed by: Taylor and Green, FF/R.I.B.A., Architects.

NORTHERN URBAN, (Below)
Bidston Court, Boundary Road, Birkenhead, Cheshire.
Commissioned by: Melville Curlender.
Designed by: James and Bywaters, A.A.R.I.B.A., Architects.



SOUTHERN RURAL
Frenchlands Hatch, Ockham Road South, East Horsley, Surrey. 13 old people's dwellings and 1 warden's house.
Commissioned by: The Architects' Benevolent Society.
Designed by: Clifford Culpin and Partners, F/A.R.I.B.A., Architects.



SOUTHERN URBAN, (Right)
Parkgate, Somerhill Road, Hove.
Commissioned by: Bargood Estate Ltd.
Designed by: Eric Lyons, O.B.E., F.R.I.B.A., M.S.I.A. Architect.

MIDLAND URBAN, (Left)
Alderson Place, Queens Road, Norwich.
Commissioned by: City & County of Norwich.
Designed by: David Percival, B.A., A.R.I.B.A., M.T.P.I., City Architect.

A MODULAR CITY FOR THE PRAIRIES

by E. A. Levin

The two classic attitudes to the question of urban form are those represented by Le Corbusier's *Radiant City* on the one hand, and Frank Lloyd Wright's *Broadacre City* on the other. All other theories about the perfect city lie somewhere in between these two great polar conceptions.

Most of these ideas are Utopian, in the sense that they have no context of time or place; do not seem to be constrained by the great burden of historical impedimenta and inertia; pretend to universal validity. This is not to say that such exercises are not valuable. On the contrary, they are of great importance inasmuch as they illuminate the general problem of urban form. I raise these points merely to emphasize the fact that I do not consider the scheme which I am about to discuss as belonging to the same category of ideas. It is of very limited scope only having relevance for a specific and special set of conditions which exist in the flat table-land of the western Canadian prairies. It was designed mainly as an exercise in response to a public debate which was carried on for a short time in the local press of the City of Regina, over the relative merits of the "curvilinear" street pattern in the new subdivisions of the City and the "grid" layout of the older residential areas.

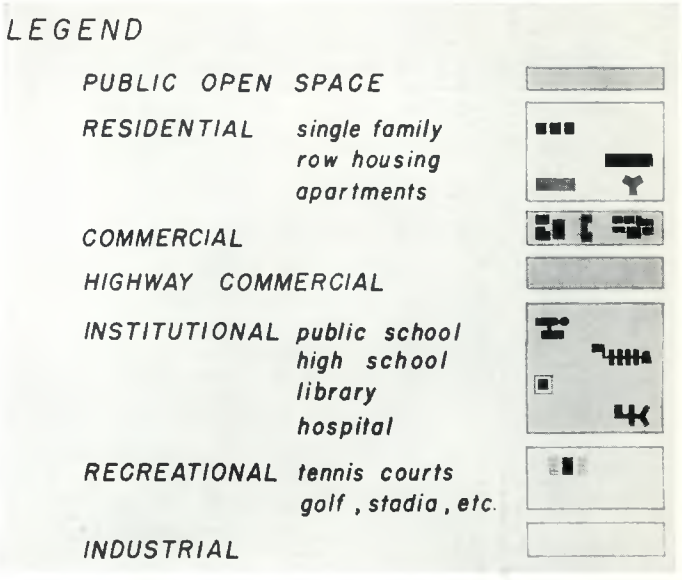
It is of course quite futile to argue about the relative virtues of straight or curved streets in absolute terms—in themselves, neither is inherently good nor bad. It is only in the context of a specific local and functional situation that questions of merit have any meaning.

There are a number of qualities which distinguish a good layout from a poor one. More important amongst these, rather than the mere geometric shape of the streets themselves, is the sense of order and appropriateness which informs the whole design. In a good layout, the impression is not given that anything is done arbitrarily or that any element in the layout is not appropriate to the job for which it is intended. Curved streets for example should be dictated by their intended vehicular densities while open spaces should incorporate existing landscape features and so on.

In areas of significant topography or natural landscape a good layout will reflect these disciplinary elements in a relatively flowing or cursive street pattern, with skilfully used devices for opening vistas on to incidents of natural beauty and with lots arranged so as to preserve as much of the tree growth, knolls and other features as may be desirable.

On the prairies however, there could be justification in expecting something rather different. Around Regina, and in fact over a vast area of Saskatchewan and Manitoba, the land is a relatively featureless, undifferentiated plain. In these circumstances, where there is no discipline of nature, it seems to me that other disciplines must be employed and in large measure these must be self-imposed by the designer. So many subdivisions, particularly for the prairie situation, are failures because there is no sense of structure or coherent form in the design. In other words, there has been no design discipline imposed either physically by the land or conceptually, by the designer, and the result has been mere arbitrary caprice without meaning.

The exercise which we are discussing here is based on the grid system for a number of reasons. Firstly, one of its purposes was to demonstrate that the rectangular grid could be used effectively as a basis for good subdivision design. It is in fact a demonstration of the "superblock" principle. Secondly, the existing primary survey of sections, townships and ranges was accepted as a basic discipline, as was also the universal familiarity with, and cultural bias toward, the rectangular grid as



the basic skeletal structure of subdivision layouts. Finally, I wanted a simple form which could be used as a modular unit and repeated over and over again to create successively higher orders of urban organization, from the basic residential neighborhood to the metropolis and in view of the other assumptions, the rectangle seemed eminently suited to this need. It is of course true that given other assumptions, a different form such as the hexagon or the circle might have served equally well.

It is from this modular unit, which is used to organize successively more complex urban forms, the conception derives the name "The Modular City".

The basic building-block of the modular city is the residential neighborhood. The area occupied by the neighborhood is a quarter-section. This gives the neighborhood a dimension of a half-mile on each side and an area of 160 acres. The quarter-section is bounded on all sides by a four-lane throughway. The word throughway is used in the sense that this street is intended for through-traffic and allows it to move with a minimum of interruption. Major intersections occur only every half-mile, there is no building frontage along its entire landscaped length so that it provides a pleasant avenue for traffic. The landscaping also serves as a dividing element between the major throughway and the flanking neighborhood collector streets. This may be seen in *Figures 1* to *5* where the dark strips between the throughway and the neighborhood collector streets represent the landscape feature.

Each neighborhood is entered from the throughway via a break in the flanking landscape strip, located at the mid-point of the neighborhood collector street. Immediately opposite this entry, on alternate sides of adjacent neighborhoods, is a neighborhood shopping centre. This arrangement can be seen more clearly by referring to *Figure 5* showing a district. The neighborhood shopping centres are at the east and west entries into the neighborhood in one case and in the adjacent neighborhood, they are placed at the north and south entries.

A neighborhood park extends through the centre to the extremities of the neighborhood and is flanked by high-rise apartments. This park is the location for the elementary school, neighborhood library, tennis courts, playground and other recreational facilities and devices serving the neighborhood's needs.

The three neighborhoods worked out in some detail in *Figures 1, 2* and *3* indicate that a considerable degree of variety is possible within the comparative rigidity of the encompassing grid frame. Very high densities are possible, depending on the type of accommodation provided. *Figure 1* shows a neighborhood made up entirely of row houses and apartments, an arrangement capable of densities of 100 persons per acre or more, while *Figure 3* shows a development using only single-family dwellings and apartments with correspondingly lower density. This flexibility within the discipline of the grid is in fact one of the most important aspects of the conception. Whatever freedom of design is felt to be necessary in the creation of the urban environment is found and expressed within the quarter-sections bounded by the framework of the throughways.

Every neighborhood contains a wide range of dwelling types and the apartments can always be sited adjacent to the neighborhood park. The population of a neighborhood would be about 5,000 persons. The details of the residential development are of course only diagrammatic suggestions and in actuality would probably assume different forms.

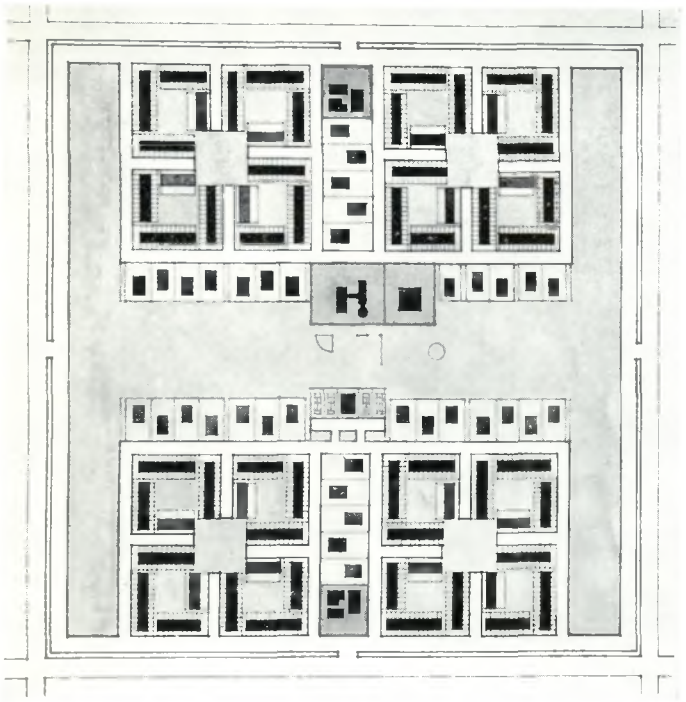


Figure 1 A Neighborhood.

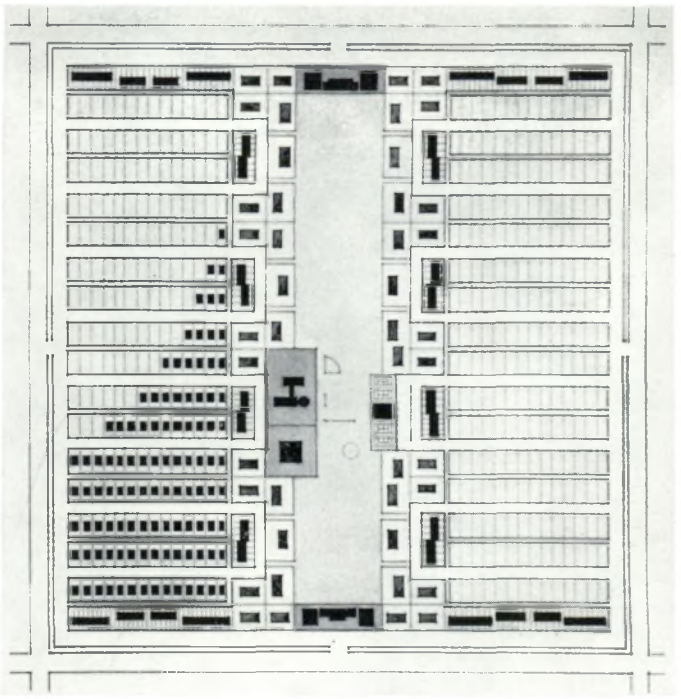


Figure 2 A Neighborhood.

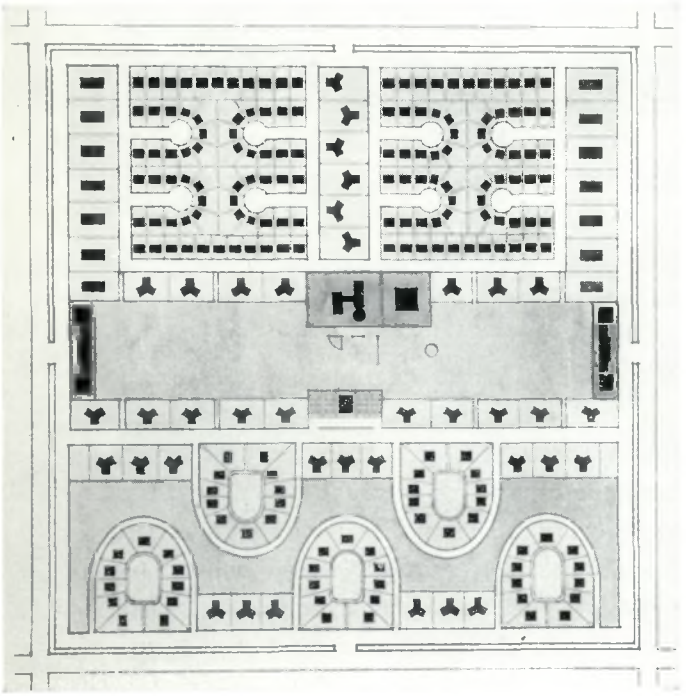


Figure 3 A Neighborhood.

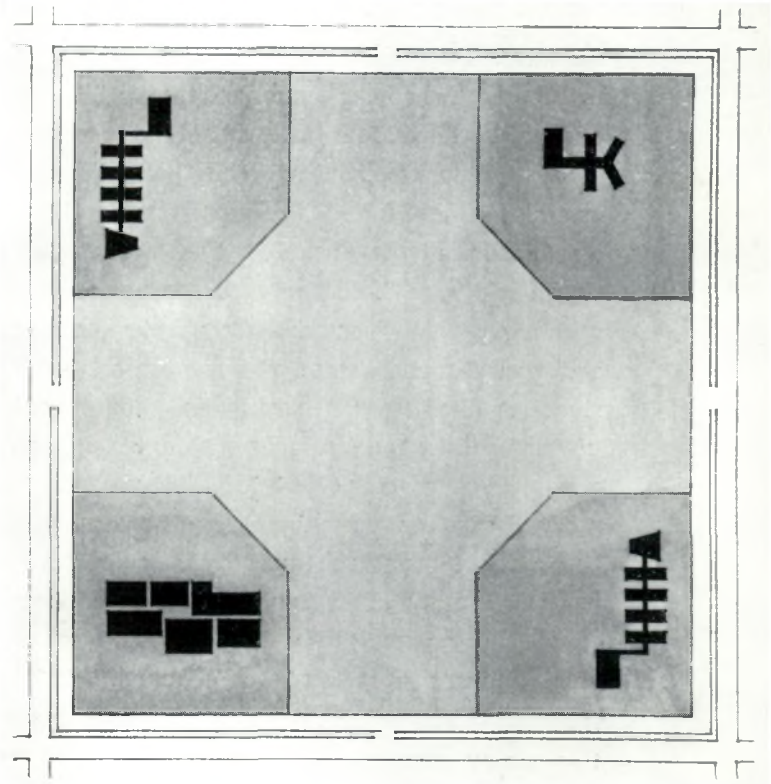


Figure 4 A District Centre.

PHOTOS BY SASKATCHEWAN GOVERNMENT.

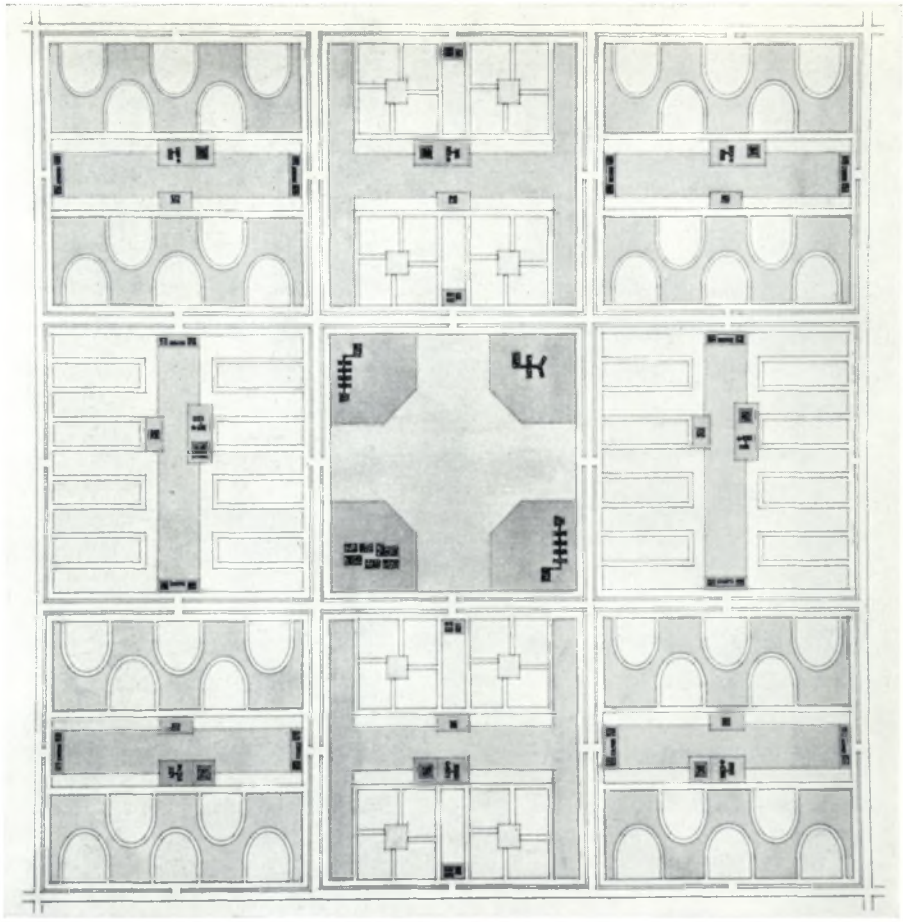


Figure 5 A District.

However, the neighborhood collector street, the neighborhood shopping centres and the neighborhood park are intended as firm elements in the conception.

A group of eight neighborhoods with their central facilities forms a district. This is shown diagrammatically in *Figure 5*. The district centre, shown in *Figure 4*, consists of a quarter-section of open parkland in which are located, at the quadrants, a district shopping centre, two high schools and a clinic. A district would have about 40,000 people.

Four districts are combined to form a city with a population of about 160,000. These would be grouped around a central business section and would be separated from each other by strips of park a half-mile wide. Throughways would encircle the parks, and the central business function could expand into the open space as required. Parking facilities could be provided at the four major throughway intersections forming the corners of the half by half-mile central business area which could be organized almost completely as a pedestrian precinct with relatively short walking distances to reach business destinations in any direction. This level of organization is illustrated in *Figure 6*.

The park spaces would, for the most part, be developed as landscaped green "fingers", but in them could be located the cultural buildings of the community—museums, art galleries, concert halls and other forms of cultural activity.

Figure 7 shows how three such city groupings could be organized to form a metropolitan area of about half a million people. The arrangement bears a generic relationship to the linear city concept, in which the urban area is strung out along a major inter-provincial highway like the beads on a string. The interspersal of agricultural land with the urban rectangles could be indefinitely extended to form a mosaic of development in which the problems of sprawl need never arise, since the form of each phase of growth is pre-determined.

The central business district function at the level of organization of the metropolis is the most imponderable element in the whole conception. It may be assumed that some of the central area

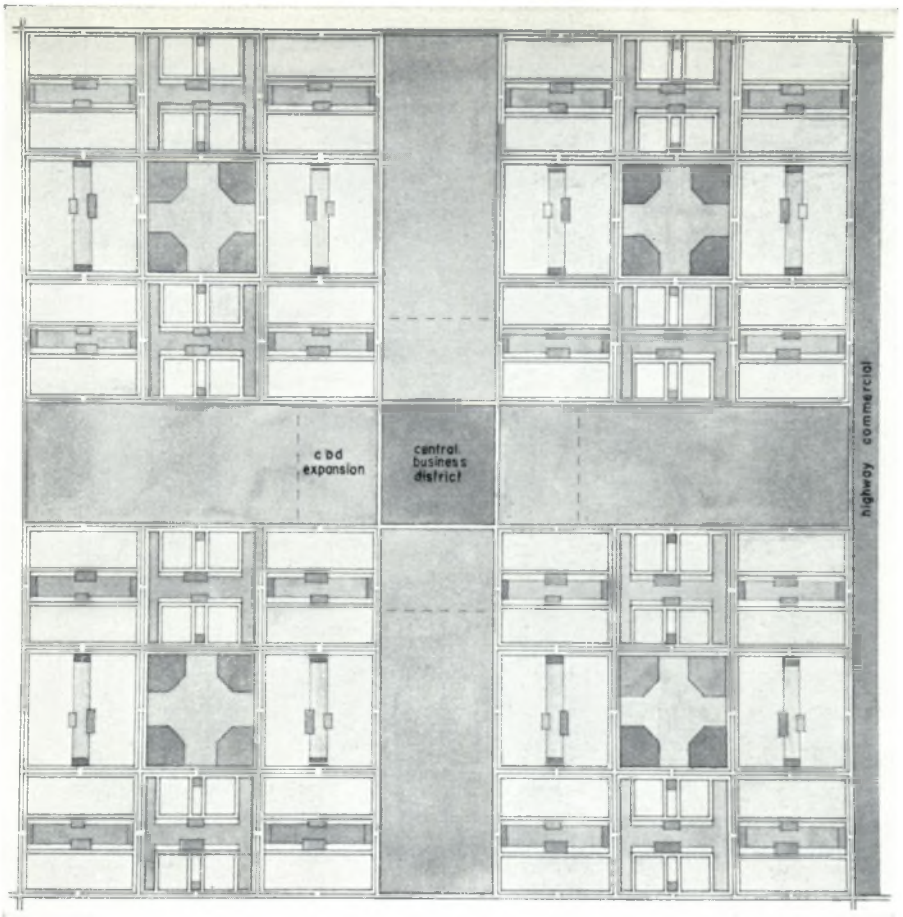


Figure 6 A City

functions in the original city would decentralize to the other city centres as the population increased, although to what extent cannot be foreseen. Some of the food and department stores could be expected to locate in the new central areas in much the same way as these facilities are now moving out to the new suburban areas, simply because in the modular city there would be no suburbs as we now know them. The residential areas would be grouped about the central business district so that no dwellings would be more than three miles from the business centre. It may be argued that the repetition of a business centre for every unit of 160,000 would prevent the creation of a "true" city centre with the "urban qualities" which many people think a city centre should have. Even if it were possible to concentrate all the central area facilities into one location—which of course it isn't under any circumstances—there is still some question as to the degree to which an "urban feeling" is dependent upon sheer numbers of population and of civic establishments. The decentralization envisioned in this scheme need not necessarily impoverish any of the central business districts, in terms of its capacity for visual excitement and the richness of its "urban" qualities.

Businesses not normally requiring central area locations, such as used car lots, and highway-oriented businesses like drive-in restaurants, would be located along the throughways connecting the city unit with the major highway artery. *Figure 7* shows these locations as a dark strip along the eastern flank of each city unit, providing it with three and one-half miles of frontage for this kind of establishment.

The industrial area would be located between the major highway and the railway. Those recreational facilities which demand large areas of land such as golf courses, sports stadia and so on would be located between the major highway and the throughway connecting the parts of the metropolis.

As with all other schemes in which open space is a basic element in the design, the practical problem of acquiring this space for the neighborhood parks, district parks and the parkway "fingers" of the city is recognized as a formidable one. These

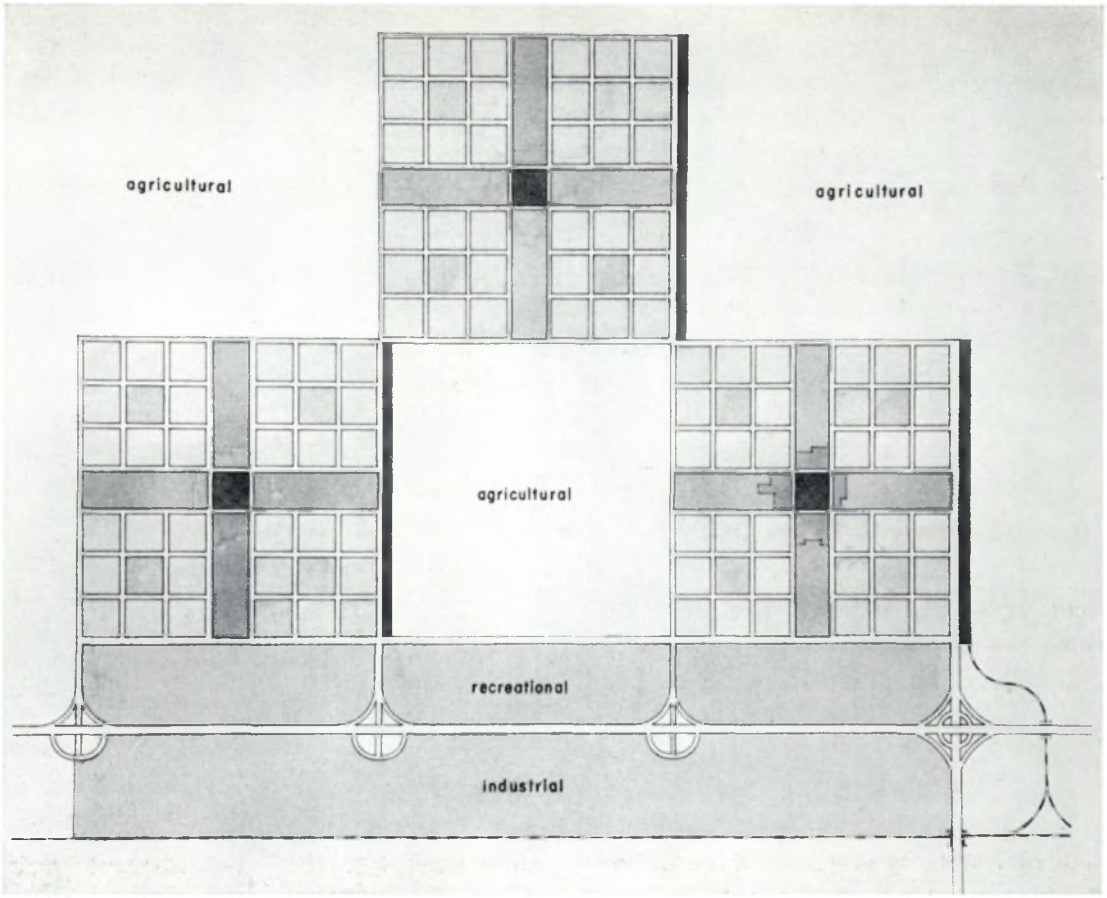


Figure 7 Metropolis.

would simply have to be acquired in the same way as any municipal park is acquired today. The agricultural areas between the urban rectangles would presumably be assured by zoning.

As suggested at the outset, the scheme is not intended merely as a simplified diagram or an ideal concept of urban form. It could be implemented virtually as shown in the illustrations almost anywhere in the vast area of table-land in the prairie provinces. As a concept of urban form it will of course not appeal to everyone. It has certain obvious characteristics which may be considered faults; it is for example very highly formalized and rigidly disciplined. However, its greatest virtue perhaps lies in these very qualities. It is capable of indefinite extension and growth *under control* without the problems of "fringe" development which normally accompany the process of urbanization. It is of great simplicity and can easily be understood by the average person without technical training. Members of municipal councils should be able to apprehend readily both its form and its objectives and to foresee in its totality the future form of their community. What is perhaps more important, it would enable virtually any municipal council to deal systematically with the growth of their community within a simple and clearly articulated conceptual framework which would simplify to a large degree the administrative problems of planning, particularly those of zoning and development control.✦✦✦

Winnipeg born, Mr. Levin received his Architectural Degree from the University of Manitoba. He did post-graduate work in planning at the School of Planning, London, England and at the University of British Columbia. He was employed in the Architectural and Planning Division of Central Mortgage and Housing Corporation and is now the Director of Community Planning for the Province of Saskatchewan.

LE MARCHÉ SECONDAIRE D'HYPOTHÈQUES — UN ANNIVERSAIRE

Monsieur Couillard est chef du Service d'information de la Société Centrale d'Hypothèques et de Logement.

par R. G. Couillard

Il s'est écoulé presque une année entière d'activité soutenue en vue d'établir un marché secondaire des prêts hypothécaires assurés aux termes de la Loi nationale sur l'habitation. En jetant un coup d'oeil rétrospectif sur les réalisations des quelques derniers mois, la Société centrale d'hypothèques et de logement espère qu'une base solide a été établie dans cette sphère d'activité économique sur la scène canadienne des placements.

Beaucoup de choses ont été dites et écrites pour exprimer qu'un marché secondaire d'hypothèques au Canada était désirable et pratique, et nous pouvons supposer que la plupart sont bien au courant du rôle qu'une telle réalisation est appelée à jouer dans notre monde de placements. A titre de rappel, qu'il nous suffise de dire que la création d'un marché secondaire d'hypothèques était destinée à établir une plus grande disponibilité de deniers à

placer dans des hypothèques—ce qui est extrêmement important pour maintenir un volume suffisant de construction de nouvelles maisons.

L'idée d'un marché secondaire d'hypothèques dans notre pays, ne date pas d'hier. Elle fait l'objet d'une étude minutieuse, approfondie depuis au moins l'année 1954. A compter de cette année, la Loi nationale sur l'habitation a prévu la mise sur le marché des hypothèques LNH et au cours des années qui ont suivi, on a enregistré une certaine activité. Toutefois, en dépit des revenus attrayants, des très fortes garanties accordées aux bailleurs de fonds et de la qualité des hypothèques LNH comme garanties de placements, le volume des transactions n'a jamais atteint les proportions qu'il aurait pu atteindre. En conséquence, pendant une période où des sommes considérables de capitaux étaient placées dans les industries et les ressources du pays, la demande de financement hypothécaire devait faire concurrence à une demande d'autres formes de crédit à long terme. Le résultat dépendait de la quantité de fonds que le gouvernement affectait aux prêts hypothécaires.

Un certain nombre de raisons peuvent être citées, pour expliquer le développement limité d'un marché secondaire d'hypothèques. En premier lieu et avant tout, il y a le fait qu'un grand nombre d'acheteurs possibles n'étaient pas au courant des occasions de placements qui leur étaient offertes dans le domaine des hypothèques. En particulier, les bailleurs de fonds autres que les institutions, comme les fonds de pension, les fonds de fiducie et de succession, ne connaissaient pas les procédés de placements dans des hypothèques et c'est pourquoi ils ne se sont pas rendu compte qu'ils pouvaient acheter ce qui était l'équivalent d'une obligation hypothécaire appuyée par une garantie du gouvernement.

Une autre raison prédominante qui a empêché le marché de se développer plus rapidement a été la pénurie de papiers-valeurs mis en vente. Un vaste groupe de prêteurs, les compagnies d'assurance sur la vie, placent des capitaux dans des hypothèques surtout comme dans des valeurs à longue échéance. Les banques à charte ont une raison différente. Pendant un certain temps, elles vendaient et administraient des prêts hypothécaires qu'elles avaient consentis, mais des conditions défavorables, comme l'augmentation des taux d'intérêt, ajoutée à la restriction contenue dans la Loi sur les banques, relativement au taux d'intérêt de 6 p. 100, rendirent la vente d'hypothèques sans valeur pour les banques, vu qu'elles ne pouvaient plus remplacer ces valeurs vendues par d'autres placements hypothécaires, au taux d'intérêt en cours.

Étant donné que la demande de capitaux de placement pour soutenir les nombreux secteurs de notre économie, devenait de plus en plus forte chaque année, et parce que à chaque année aussi, il devenait de plus en plus important qu'il existe une disponibilité constante de deniers afin de répondre aux besoins grandissants de logements dans notre pays, l'impulsion nécessaire a été donnée à un mécanisme capable de jeter les bases d'un marché secondaire d'hypothèques et de le faire progresser. Si on considère le rendement de ce marché et le succès remporté pendant ces quelques mois de formation, la perspective de crédit hypothécaire s'annonce bien.

UNE REVUE DE L'ANNÉE

Trois émissions de prêts hypothécaires ont été mises en vente par soumission publique depuis le mois d'avril 1961. A cette époque, l'honorable David-J. Walker, ministre responsable de l'activité de la Société centrale d'hypothèques et de logement, qui est l'organisme fédéral du logement, a demandé à cette Société de prendre les mesures nécessaires afin de disposer de la portion négociable de son portefeuille d'hypothèques.

Seuls les prêteurs agréés aux termes de la Loi nationale sur l'habitation et leurs agents approuvés, ainsi que les membres de "Investment Dealers' Association of Canada" ont été autorisés à faire des soumissions.

Les offres d'hypothèques permettaient de présenter des soumissions fermes ou des soumissions à option; une période de 60 jours était accordée pour lever ces options. La Société centrale d'hypo-

thèques et de logement s'est gardée de faire toute autre offre d'hypothèques avant l'expiration de la période prévue pour la levée des options. Ceci a donné aux acheteurs une période raisonnable de temps pour revendre leurs prêts, ce qui a stimulé l'intérêt des acheteurs et une plus grande activité sur le marché secondaire hypothécaire.

Toutes les émissions jusqu'à ce jour comprenaient des prêts qui portaient intérêt à 6¾ p. 100 par an. Tous ces prêts étaient complètement déboursés et approuvés pour des périodes de 25 à 30 ans. Les tranches d'hypothèques mises en vente avaient une valeur qui variait de un quart à un demi million de dollars chacune, et, sur demande, la SCHL a continué d'administrer ces prêts.

Jusqu'à ce jour, des hypothèques de la Loi nationale sur l'habitation, d'une valeur globale de 51 millions de dollars ont été mises en vente; toutefois, on avait limité à 45 millions la valeur des soumissions à recevoir. Le reste a été offert afin de donner aux futurs acheteurs une plus grande variété dans le choix des régions. Certaines tranches d'hypothèques consistaient en prêts hypothécaires consentis dans des régions déterminées, alors que d'autres étaient préparées de façon à comprendre des prêts accordés dans tout le pays. La Société a reçu des soumissions des banques, des compagnies d'assurance sur la vie, des compagnies de fiducie.

L'activité des premiers mois a donné comme résultat la vente d'une partie du portefeuille d'hypothèques de la SCHL, évaluée à 40.7 millions de dollars; les ventes se sont faites sous forme de soumissions fermes ou suivant la formule de demandes d'options.

LES HYPOTHÈQUES OFFERTES

La prime moyenne des soumissions acceptées lors de la première offre de 15 millions de dollars, annoncée en juin 1961, était de 101.17. Aucun prêt faisant partie de la première émission n'a exigé d'être administré par la Société centrale d'hypothèques et de logement et la prime moyenne dans ce cas, a été de 101.25; en tenant compte de l'administration des prêts par la SCHL, la prime moyenne était de 100.17.

Des 30 tranches d'hypothèques évaluées à $500,000 chacune, il y en eut cinq qui ne firent l'objet d'aucune soumission. Des 25 autres, valant environ 12.5 millions de dollars, la valeur totale des soumissions a atteint le chiffre de 31 millions de dollars. Lors de la première enchère, la Société a reçu des soumissions des banques à charte, des compagnies d'assurance sur la vie, des compagnies de fiducie et des négociants en valeurs. C'était un début modeste mais encourageant tout de même.

Une liste plus considérable de soumissionnaires et d'usagers de la soumission à option de 60 jours a caractérisé la seconde offre de prêts hypothécaires LNH assurés, rendue publique au mois d'août 1961. Au total, la valeur des soumissions et des demandes d'options reçues s'est élevée à 21 millions de dollars pour une offre de prêts évalués à 17.5 millions dont il ne fallait pas vendre plus de 15 millions. La valeur des soumissions fermes acceptées était de 9.75 millions de dollars, tandis que celle des demandes d'options qui furent acceptées atteignait le chiffre de 3.75 millions. Aucun de ces prêts ne demandait d'être administré par la Société centrale d'hypothèques et de logement.

Les prêts hypothécaires consentis dans des endroits déterminés ont été groupés en 29 tranches d'une valeur de $500,000 chacune et en 12 autres de $250,000 chacune. La prime moyenne acceptée a été 101.35.

Les résultats de la troisième offre de prêts hypothécaires LNH assurés ont été rendus publics le 22 novembre 1961. Pour la première fois, les prêts d'une valeur limite annoncée de 15 millions de dollars ont été complètement achetés par les bailleurs de fonds. La Société a reçu des soumissions et des demandes d'option d'une valeur totale de 30.5 millions de dollars.

Afin d'offrir aux bailleurs de fonds une meilleure occasion de faire un choix, la Société centrale d'hypothèques et de logement, à cette occasion, a dressé une liste de prêts à vendre, évalués à 18.5 millions de dollars, soit la liste la plus considérable jamais encore soumise. La valeur des soumissions acceptées était limitée à 15 millions. La valeur des

soumissions fermes acceptées a été de 8.75 millions, tandis que celle des demandes d'options s'est chiffrée par 6.25 millions. La plupart des soumissions reçues ne demandaient pas que les prêts soient administrés par la SCHL.

Les hypothèques étaient groupées en 31 tranches de $500,000 chacune et en 12 tranches de $250,000 chacune. Toutes ces tranches d'hypothèques comprenaient des prêts consentis dans des centres déterminés. La prime moyenne des soumissions acceptées a été de 101.79.

CONSIDÉRATIONS

L'activité dominante dans le développement du marché secondaire d'hypothèques, au cours de ces phases initiales, a été la vente de tranches d'hypothèques aux banques à charte, aux compagnies d'assurance sur la vie, aux compagnies de fiducie et aux négociants en valeurs qui ont revendu des hypothèques à d'autres institutions.

Une forte proportion des hypothèques ont été revendues par les premiers acheteurs à des fonds de pension qui, comme nous l'avons mentionné plus tôt, n'avaient jamais antérieurement inclus ce genre de valeur dans leurs portefeuilles de placements.

Un grand nombre d'hypothèques ont été achetées par quelques négociants en valeurs et ceci est tout à fait compréhensible vu que les valeurs garanties par des hypothèques ne font pas partie du genre de transactions ordinaires de ces compagnies. On prévoit que leur participation prendra des proportions plus fortes une fois qu'un plus grand nombre d'entre elles auront eu l'occasion de s'organiser de façon à pouvoir s'occuper de ce genre de placement.

Il y a aussi d'autres bailleurs de fonds qui consentiraient à participer indirectement au marché en achetant des obligations, des certificats garantis ou autres papiers-valeurs avalisés par des hypothèques assurées. Cela permettrait l'établissement de compagnies privées qui serviraient d'intermédiaires entre ces bailleurs de fonds et les vendeurs d'hypothèques. Ces compagnies acheteraient des hypothèques pour les revendre à des bailleurs de fonds particuliers. Ainsi, le petit bailleur de fonds, qui n'a que des sommes modestes à placer, pourrait acheter des valeurs et participer toute de même au marché hypothécaire. Il existe présentement des signes encourageants de la formation possible de ce genre de compagnies. Dans certains cas, elles agiraient comme subsidiaries des institutions financières établies. Vu qu'elles s'occuperaient particulièrement des valeurs garanties par des hypothèques, leurs efforts seraient dirigés vers une plus grande participation de la part des particuliers.

Il a été nécessaire, toutefois, au développement d'un marché actif de prêts hypothécaires LNH, d'aborder d'une façon beaucoup plus flexible la question de la fixation du taux d'intérêt maximum aux termes de la Loi nationale sur l'habitation. Il fallait maintenir ce taux d'intérêt à un niveau équivalent aux autres taux à longue échéance, et même encore plus que dans le passé. C'est pourquoi, l'honorable David-J. Walker, au moment même où il annonçait l'établissement du marché secondaire d'hypothèques LNH, a proposé une revue semestrielle par le gouvernement de l'intérêt-plafond LNH, en tenant compte du rendement à longue échéance des obligations du gouvernement, qui prévaudrait à ce moment-là. Environ six mois plus tard, le 6 novembre 1961, le ministre annonçait une réduction des taux maximums d'intérêt, dans le cas d'une variété de projets qui pouvaient être financés en vertu de la Loi nationale sur l'habitation. Cela représentait une diminution de 6¾ p. 100 à 6½ p. 100 du taux d'intérêt maximum qui peut être exigé sur les prêts LNH aux propriétaires-occupants ainsi que sur les prêts pour la construction de logements à loyer.

La réduction du taux d'intérêt ajoutée à l'intérêt grandissant des institutions financières à l'égard des placements-hypothèques, a entraîné une augmentation graduelle de la prime moyenne obtenue à chaque offre d'hypothèques.

La SCHL convaincue qu'un marché secondaire d'hypothèques, alimenté avec soin et comme il convient, produira un effet des plus significatif sur les marchés financiers du Canada et en particulier, sur l'avenir de l'industrie de la construction de maisons au Canada.✦✦✦

CASA LOMA

The "dream home" of Sir Henry Pellatt was designed and erected under the supervision of the late E. J. Lennon, a well-known Toronto architect, from sketches made by Sir Henry of European castles.

The building was brought to its present state of completion in 1914.

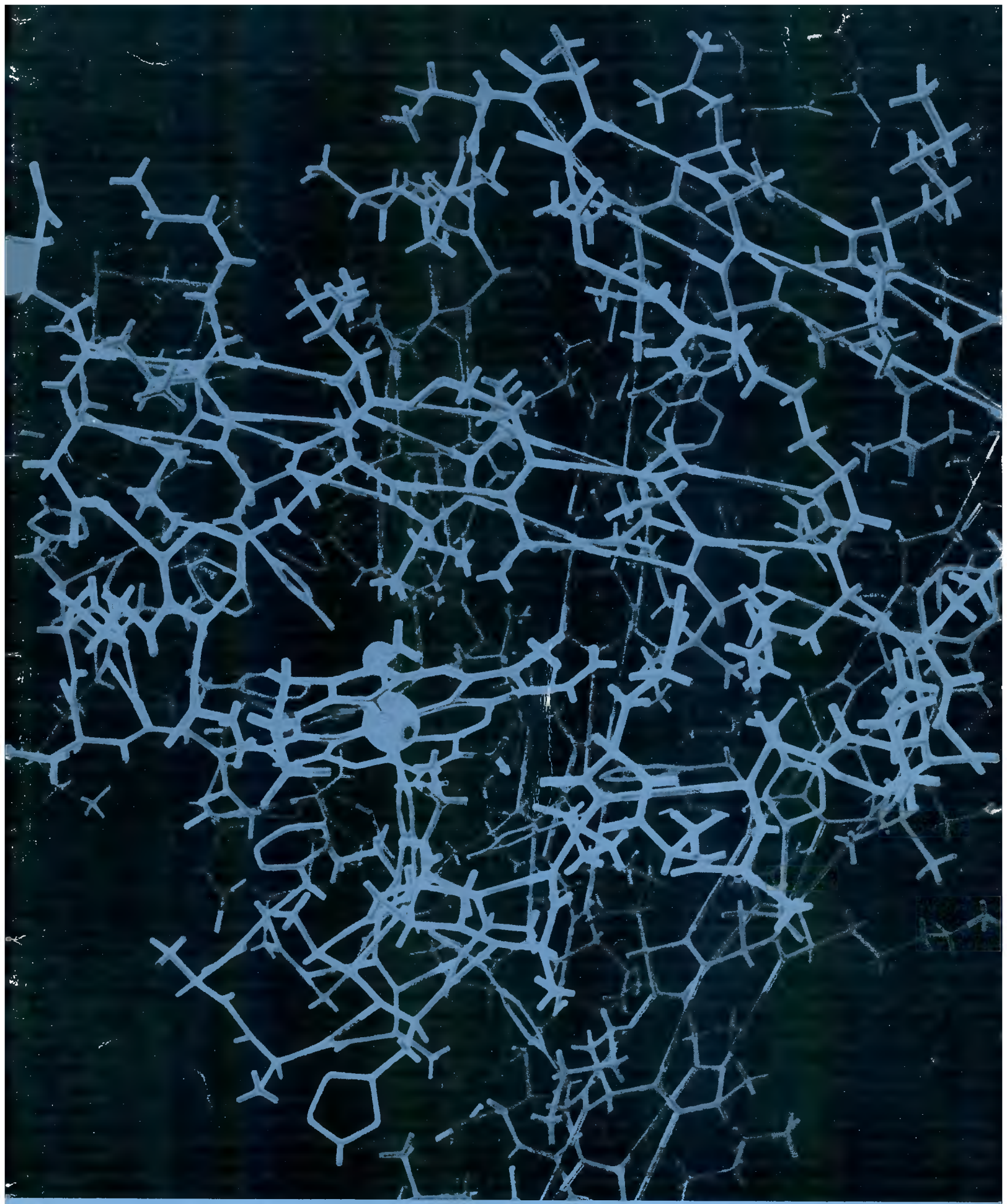
Sir Henry, who rose through the ranks to become the Commanding Officer of the Queen's Own Rifles, envisioned bequeathing the castle to the City of Toronto as a military and historical museum. For this reason, the interior was built of masonry and the main floor of reinforced concrete overlaid with teakwood, in order to sustain the heaviest military equipment. The basement, with 20-foot ceilings, was made large enough to drill an entire regiment.

Of the 98 rooms comprising the castle proper, perhaps the most beautiful is the drawing-room. The design is Georgian and it is panelled in oak. The hand carving alone cost $30,000.

The main hall runs the entire length of the castle. Its walls are panelled in quarter-cut oak and it is an exact replica of the one in Windsor Castle known as Peacock Alley. The Burmese teakwood floor is laid like a ship's planking, without nails. The planking, 2½" thick, is keyed together by means of dove-tailed wedges and mahogany pegs.

Canada's only genuine castle is complete with hidden panels and staircases. It is now leased by the Kiwanis Club of West Toronto who operate it as a tourist attraction and youth recreation centre. The Club is in the process of refurnishing the rooms and it will truly be a monument to an era which will never be seen again.

CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA



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The Parliament Buildings, Ottawa
PHOTO FEATURE

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The cover design is a myoglobin molecule free to grow and expand like the cities described in the article on Page 2 by Moshe Safdie.

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THE MASTER PLAN: GROWTH, CHANGE

Perhaps this article should have been entitled "A Plea to the By-Law Makers" and read: "Please change those housing by-laws . . .". But if we want to be optimistic, we could say that we are well on the way to evolving suitable forms for the domestic environment. Although the problems are numerous and present practice shocking, there is an increasing awareness of them and new proposals of architects and planners will eventually be realized. However, even the most optimistic of us must be concerned about the over-all urban-pattern into which the smaller sectors merge into a metropolis.

Organized-preconceived-urban planning is increasingly being used to untangle the confusion of our cities. In the past, natural evolution and aging directed the slow growth and gradually modified urban form. Today, when the rate of growth is much greater, we must preconceive the urban form. Our cities can be likened to a mature 100 foot tree, which instead of taking 50 years to grow did so in one; its normal irregularities and random forms, caused by wind, rain and age, would then be replaced by geometric perfection. In the past, a path was formed by people walking along a line for many years before it became a road. Today we build the road before the people have come.

Had the present urban structure been relatively a static one, this problem would not exist. The unprecedented growth, which has destroyed the past, demands a new ORDER. This total growth of population and economy can be looked at statistically—a complete U.S.A. of 1962, with its factories, schools, houses, theatres, etc., will be constructed in the coming 50 years—a complete new Canada in the coming 40 years. That which took 300 years to build must now be done in 50 years.

In terms of urbanism, the problems can be categorized as follows:

1. Cities passing the 10 million population mark; these are few in number and, although they are the most difficult for which to plan, they are critical to the economic and cultural life of the country as a whole.

2. Metropolitan areas which have passed the one million population mark and are expanding at a fast rate. This is the most common case and we certainly expect more than half the total population to be living in them.

3. Existing cities below one-quarter million expanding into metropolitan areas.

4. New urban centres which will occur in areas newly populated and be located where mines, power sources, etc., are found. Such cities are our hope for desirable environment but are by no means simplest to handle, contrary to expectation.

Although the aspects of planning discussed below apply to all categories, I shall refer especially to the metropolitan area of 1,000,000 plus.

In the post-war years several attempts have been made to cope with growth in metropolitan regions. The new towns of England and Sweden are aimed at creating independent urban entities around the existing cities. Ten years have shown us that this is not a solution. They are economically and culturally artificial. Even if the new towns flourished, they have remained satellites and merely added to the burden of the original urban nucleus. Similar attempts at redistribution of population, in dormitory or satellite towns, is doomed to even faster failure.

AND REPETITION

by Moshe Safdie

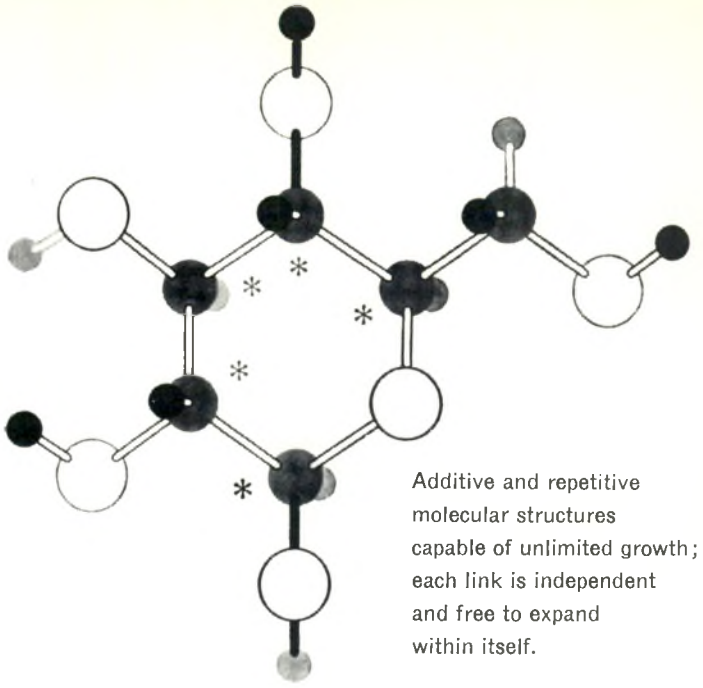
In North America a more subtle kind of dispersion has been taking place. Here various facilities have been moved, from the centres of cities, to areas along high speed highways which radiate from the central area. Such is the case with the shopping and amusement centres which have been gravitating towards the newly formed residential areas. Such development has destroyed the positive aspects of urban life and form and has not brought any satisfactory solution. The facilities so dispersed are still faced with the necessity of remaining in constant touch with the centre of the city and this results in a flow of population which only aggravates existing conditions.

If it is not satellite towns, if it is not dispersion, what then is the coming form of the metropolitan region? It will take our efforts for many years before we find out.

However, certain prerequisites can be stated. An integral part of the emerging form will be a free flowing continuous transportation system, probably incorporating public rapid transit as well as provision for personal transportation, as illustrated in Tange's Tokyo plan.

It is also clear that any solution must result in an urban complex of great unity. This complex, however, is broken up into minor entities; a continuous cellular structure of the various functions which must be able to grow, to be added to, to expand within each cell. It is this element of "growth/time" that is the neglected factor in our master plans.

We speak of space-time in architecture, but what we mean is spatial interest resulting from a moving point of view. City planning, more than any other art, is four-dimensional. The plan must grow with time, must change and transform as values and means evolve—and yet at any given moment, it must be a living fact.

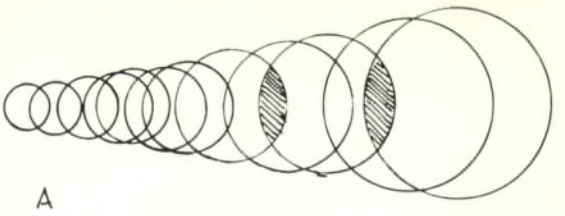


Additive and repetitive molecular structures capable of unlimited growth; each link is independent and free to expand within itself.

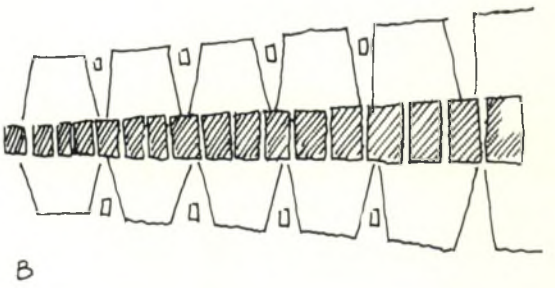
Any city plan which is three-dimensional is of necessity incomplete. After a brief period of excitement, we are terrified by the great "utopian" plans of our time—Le Corbusier's Ville Radieuse, Tange's Tokyo plan, Costa's Brazilia and others. If Ville Radieuse is objectionable today, it is because it was conceived as a city built in one day, because we refuse in western culture to accept the taste of one man on an urban scale.

The integration of the element of "growth/time" into our plans is not only an aesthetic matter. It will also enable us to solve the problems of planning which we have heretofore considered normal or inevitable—obsolescence and the consequent need for redevelopment—and the necessarily complex legislation enforcing our plans.

Vast areas of a dilapidated city must be cleared and rebuilt. Redevelopment will be needed thirty years from now on areas built today unless the present pattern can be avoided. With few exceptions, areas in the city have deteriorated only when there has been a change in land use or when the equilibrium of the area is disturbed by an adjacent expanding land use area pressuring upon it. Thus, we have stately villas becoming rooming houses, an expanding industry deforming a residential area, etc. Age is not the factor. Areas which are not disturbed in this manner, do not degenerate even after hundreds of years of existence with normal maintenance.



A: City structure capable of growth (after doxiadis). This form does not eliminate change in land use from central to peripheral.



B: Modification of "A" where land uses are considered to avoid the need for redevelopment.

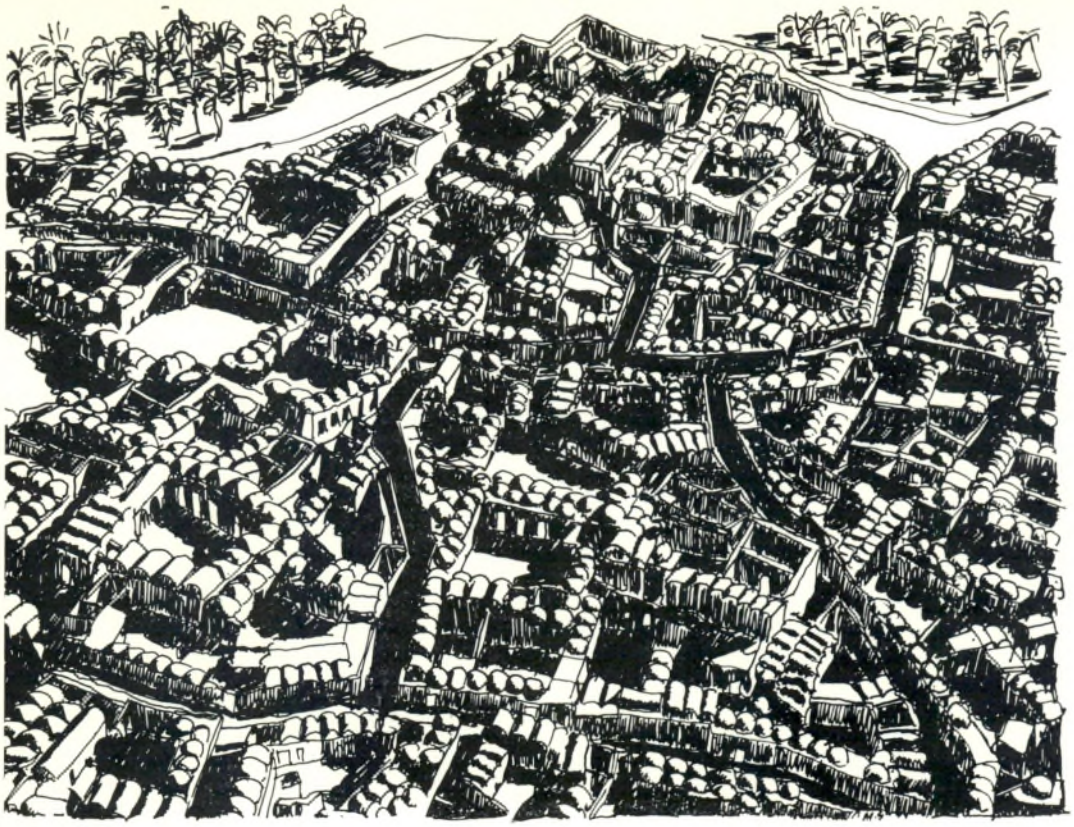
But if our cities are a conglomeration of interpenetrating functions causing each other to deform, it is only because growth with time has not been considered, because the expansion of the various functions has not been provided for and the plan made sufficiently flexible and dynamic to provide for unexpected variables.

Some plans are a set of rigid formal statements, conceived momentarily and enforced by a complex system of legislation. These plans, too, are doomed to fail. For instance, an area, because of its relationship to employment centres or because of topography, etc., tends to be of intensive land use. The plan on the other hand, prescribes low intensity and legislates accordingly. It is then only a matter of time before such legislation will be changed and the area be used contrary to the plan. We must never in our free economy, plan so as to contradict the forces of demand, land values, intensity of use, etc. But in order to do so we must predict growth—we must plan in terms of time.

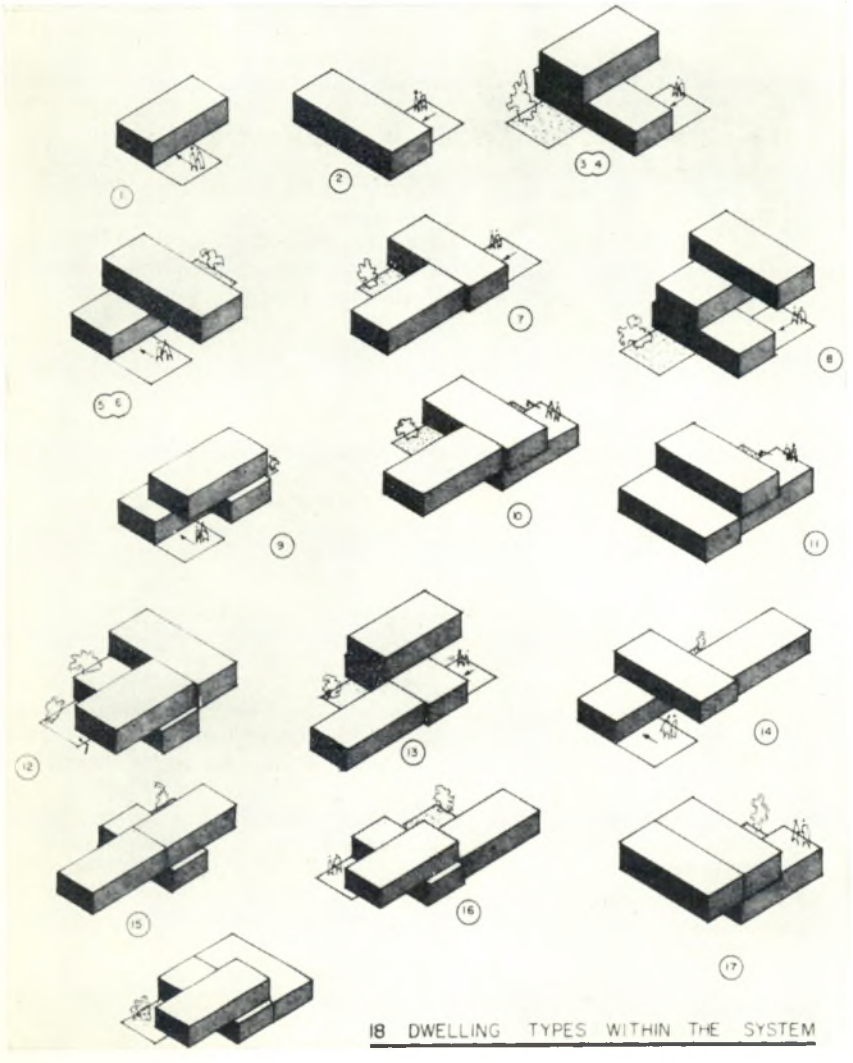
Growth and time must also be considered in the smaller urban sector. In the early stages of development land is plentiful, and land values low, and hence a tendency for low densities. As time passes, the tendency is for higher density development. This will tend to replace the initial low density unless we so plan that growth in a sector is a continuous ribbon of increasing intensive use of land, filling in the logical location in the course of time.

Where this will lead us is difficult to foresee. The obvious difficulty in predetermining change in an existing environment implies the need for flexibility. We are also tending to reject specific land use areas —to reject neighborhoods in favor of an integrated complex "all-use" urban texture. Such a course will minimize the problems, because no matter how we embark in building segments of the city it is modified with time to answer new needs. This "Architectural Mobile", a gigantic enveloping structure of an urban size into which we insert dwellings, shops, etc., at will, poses technical problems to which we do not yet have solutions.

Any use of an additive cellular urban structure, whether in a linear or other pattern will require a more imaginative approach to the problem of REPETITION. This is an aspect of the relation of one urban sector to another. Even more complex is repetition as an aspect of the design of the sector itself. We must overcome the menace of quantity, now that we are faced with habitat for the masses—the aesthetic of numbers, the laws of rhythm and harmony must be discovered. Projects should attempt to solve the aesthetic problems that result through standardization of constructional elements: through the repetition of similar and dissimilar dwellings within a larger housing unit; through the repetition of groupings of such housing units similar or dissimilar. Volumes have been written on space and structure in contemporary architecture, but

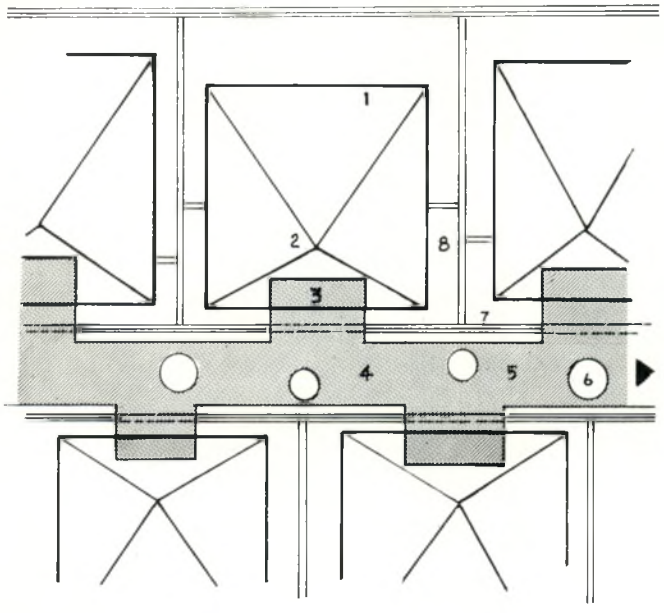


Tradition: growth through slow evolution;
repetition through necessity.



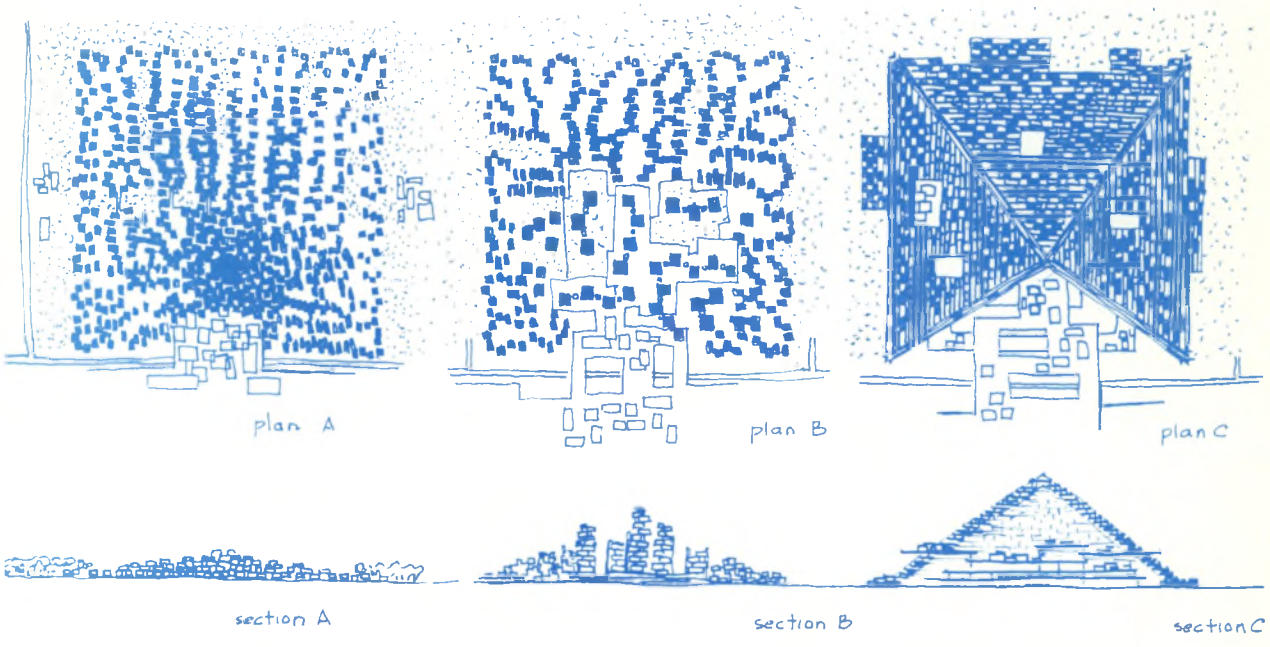
Variety of spaces
through repetition
of a group of dwellings
(P. Blom — Amsterdam).

Left, variety of
dwelling types through
repetition of one element.



KEY: 1. Low density housing
2. High density housing
3. Mixed land use
4. Consumption
5. Production employment
6. Parking harbors
7. Traffic arteries
8. Open space

A basic idea for the city plan
which can be interpreted
into formal terms in various ways.



Three interpretations of the basic plan above.

SCHEME A: Detached houses becoming more compact towards peak density area. No elevator housing.

SCHEME B: Detached houses in peripheral areas giving way to taller structures in open space in the centre.

SCHEME C: The neighborhood becomes one building: A large pyramid, with dwellings set on three sides and the fourth side open for light and air. In the central space, parking, shops, schools and other communal facilities. Inclined circulation is in the four major ribs.

repetition which is the challenging aspect of modern architecture is forgotten. Historical examples of repetition are numerous and are found in most vernaculars; the mud domes of a North African village or tiled roofs of Italy—but these are usually the result of necessity and limitation. To-day we have the privilege of choice—repetition is a voluntary act.

Repetition is encouraged by modern technology, but we must not mistake this to be the only cause. On one hand we have F. L. Wright's Broad-Acres City. Here each house sits on its one acre site—it is an entity in itself—there is no need for similarity. It is a charming idea, but not of this century. On the other hand Buckminster Fuller's "Dimaxion" house —a brilliant technical solution—but the "Dimaxion" fails because it disregards the aesthetics of numbers. We cannot accept hundreds of acres of "Dimaxions" side by side—we would go mad—nor can we accept it alone in emptiness, we could not bear the loneliness and boredom.

The use of repetitive elements is necessitated by a compact dense environment. It is difficult, if not impossible, to achieve a good environment by grouping hundreds of different elements together. We read in a committee recommendation that "variety must be introduced into habitat". This variety must be achieved by different groupings of similar elements, giving identity and reasonable choice to the individual.

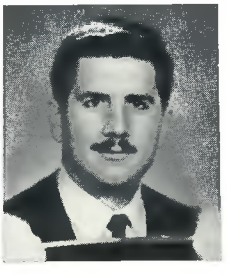
On technical grounds the necessity of repetitive elements in mass produced products is obvious. The economic savings in labor and material per unit dwelling are also obvious. But can we, using these methods, answer the basic phenomenological aspect of environment? Perhaps a fugue by Bach will give us inspiration or as west coast architect Schindler put it: "We must realize that one plus one equals two is only true in mathematics—in art and nature one plus one must become three."

We have seen that rate of growth forces us to plan ahead and predetermine urban form. Yet the plan in which time and growth are basic dimensions cannot be a formal statement since definition of exact building form is not possible at the outset. If we plan in time, we consequently replace the taste of one individual at one moment by a series of decisions of several individuals over the period of realization. Thus we shall avoid the "project" quality, the "planned" stamp which we sense to be wrong in present developments.

This implies that the conventional form-drawing of the master plan with which we are familiar is obsolete. A vital method of expression of the city plan is needed; a series of complex formulae with several variables, interpreted in terms of time—a programming for an electronic computer into which information is fed as implementation proceeds.

A basic plan diagram would set the programme. An employment/production/consumption spine is flanked by residential sectors. As the spine expands new sectors appear. A basic transportation network is set, as is a basic distribution of open spaces. The density distribution in the residential sector is mathematically defined—a "pyramid" distribution with low densities at the periphery and the highest density at the peak. This statement of the plan is open to various formal interpretations.

The structure of the expanding metropolitan region is a complex one and any simple solution must immediately be suspect. The creation of artificial satellites has already proved inadequate, limiting growth is contradictory to the development of the economy and the momentary whim of a single person at a given moment will result in a surrealist world of boredom. Therefore the only acceptable plan is a four-dimensional unity which is multi-level, flexible and capable of interpretation in terms of time. ✦✦✦



Mr. Safdie, born in Israel, is a graduate in architecture of McGill University. He was awarded nine prizes and scholarships including the Lieutenant-Governor's Gold Medal, The Hugh Robertson Prize for Design, the Turnbull Elevator Prize for a Technical Paper and the Central Mortgage and Housing Corporation Travelling Scholarship. This is the last of three articles on high density dwellings by Mr. Safdie.

MORTGAGE MARKETING — AN ANNIVERSARY

This article originally appeared in French in the March-April issue.

R. G. Couillard

One year of sustained activity in the development of a secondary market for National Housing Act insured mortgages has elapsed. Looking in retrospect at the accomplishments of the past months, Central Mortgage and Housing Corporation believes that a firm basis has been established in this sphere of economic endeavor on the Canadian investment scene.

Much has been said and written about the desirability and expediency of a secondary market for mortgages in Canada and we can assume that the role such a venture is expected to play in our investment community is familiar to most. In review, suffice to say that the creation of a secondary mortgage market was intended to establish a larger source of money for mortgage investment — which is extremely important to the rate of new house building throughout the country.

The concept of a secondary mortgage market in this country is not of recent vintage. The subject has been thoroughly discussed and carefully studied at least as far back as 1954. Since that time the National Housing Act has provided for the marketing of NHA mortgages and some activity was recorded in the ensuing years by institutional lenders. But in spite of attractive yields, the high degree of security afforded to investors and the quality of the NHA mortgages as investment securities, the volume of transactions has never reached its full potential. Consequently, throughout a period of massive capital investment in the country's industries and resources, demand for mortgage financing was obliged to compete with a demand for other forms of long-term credit. The upshot was a heavy dependence upon government funds for mortgage lending.

There are a number of reasons that can be cited to explain why a secondary market for mortgages has never fully developed. Foremost among these is the fact that many potential purchasers were unaware of the investment opportunities afforded by mortgages. In particular, the non-institutional investors such as pension funds, trusts and estates were not familiar with mortgage investment procedures and as a result did not realize that they could buy what was tantamount to a mortgage bond supported by a government guarantee.

Another prominent reason for the failure of the market to develop more rapidly was the lack of "paper" presented for sale. One large group of lenders, the life insurance companies, makes mortgage investments mainly with a view to long-term holding. The chartered banks have a different reason. For a time, they were selling and servicing mortgage loans they had originated, but adverse conditions such as rising interest rates, coupled with the six per cent interest rate restriction in the Bank Act, made further selling progress of doubtful value as the banks could not make replacement mortgage investments at the going interest rate.

In view of the fact that demand for investment capital to sustain the many sectors of our economy

was becoming more intense with each passing year, and because, with each passing year, it was increasingly important that there exist a consistent flow of money to meet the nation's growing shelter needs, the necessary impetus was applied to a mechanism capable of initiating and developing a secondary mortgage market. On the basis of its performance during these formative months, the outlook for mortgage financing augurs well.

THE YEAR IN REVIEW

Four issues of mortgage loans have been made available for sale by public tender since April, 1961. At that time, the Honourable David J. Walker, Minister responsible for the operations of the Federal housing agency, directed Central Mortgage and Housing Corporation to take appropriate measures to dispose of the saleable portion of its mortgage portfolio.

Bidding was restricted to National Housing Act lenders and their correspondents as well as members of the Investment Dealers' Association of Canada.

The mortgage offerings permitted both definitive and option bids with a suitable period granted for the exercising of the options. Central Mortgage and Housing Corporation undertook to make no further offerings until after the expiration of the option period. This permitted the purchasers a reasonable period of time to resell the loans, thereby stimulating interest and activity in a secondary mortgage market.

Three issues to date have carried an interest rate of 6¾ per cent per annum and one of six per cent per annum. All loans were fully advanced and approved on 25 and 30 year terms. Lots varied from one-quarter to one-half million dollars and, where requested, CMHC continued to service the loans.

Up to this time, $69.5 million of National Housing Act mortgages had been offered with bids to be received on $60 million only. The balance was provided to give prospective purchasers a greater variety of choice of areas. Some parcels consisted of mortgages in specific areas, others were on a country-wide basis. Tenders were received from banks, insurance and trust companies and investment dealers.

As a result of the activity during the first year of operations, $56 million of CMHC's saleable portfolio has been sold either on a definitive-bid basis or on the option-request basis.

THE MORTGAGE OFFERINGS

The average accepted tender for the first offering of $15 million, announced in June, 1961, was at a premium at 101.17. Of the 30 parcels valued at $500,000 each, there were five on which no bids were received. Of the remaining 25 parcels, worth about $12.5 million, total bids amounted to $31 million. In the first auction, bids were received from chartered banks, life insurance and trust companies and investment dealers. No requests for options were received on this first call.

A wider list of bidders and use of the option arrangement featured the second offering of NHA insured mortgage loans made public in August, 1961. Total bids and requests for options in the amount of $21 million were received for the $17.5 million offering of which not more than $15 million was to be sold. The value of accepted definitive tenders was $9.75 million, while accepted requests for options totalled $3.75 million. The bulk did not call for administration by Central Mortgage and Housing Corporation.

The mortgages were assembled for specific centres in 29 packages of $500,000 and 12 packages of $250,000 each. The average accepted tender price was 101.35.

Results of the third offering of NHA insured mortgages were made public November 22, 1961. For the first time the announced limit of $15 million of loans was completely taken up by investors. Total bids and requests for options in the amount of $30.5 million were received by CMHC.

To provide investors with more opportunity for selection, Central Mortgage and Housing Corporation, on this occasion, listed $18.5 million of loans for sale, the largest listing until that time. Acceptances were limited to $15 million. The value of accepted firm bids was $8.75 million while accepted requests for options totalled $6.25 million. Most of

the bids did not call for administration by CMHC.

The mortgages were assembled in 31 packages of $500,000 and 12 packages of $250,000 each. All parcels consisted of mortgage loans in specific centres. The average accepted tender price was 101.79

A record $60.25 millions in firm bids and requests for options from the largest number of investors to enter bids were received in March, 1962 by Central Mortgage and Housing Corporation in its fourth offering of National Housing Act insured mortgage loans for sale.

For the second consecutive time the announced limit of $15 million was completely taken up. To provide investors with more opportunity for selection, CMHC listed $18.5 million of loans for sale but limited acceptances to $15 million. The value of accepted firm bids was $13.5 million while accepted request for options totalled $1.5 million.

For the first time all loans carried an interest rate of six per cent and the average accepted tender price was 97.60. Most of the bids received did not call for administration by CMHC.

Once again, the mortgages were assembled in 43 packages with 31 valued at approximately $500,000 and 12 at approximately $250,000, all parcels consisting of loans in specific centres. Bids were received from chartered banks, life insurance and trust companies and investment dealers.

REFLECTIONS

The dominant area of activity in the development of the secondary mortgage market in these early stages has been through the sale of blocks of mortgages to chartered banks, life insurance companies, trust companies and investment dealers, who have resold the mortgages to other institutions.

A large portion of the mortgages have been resold by the primary purchasers to pension funds which, as mentioned earlier, never included this type of security as investments.

Many of the mortgages were purchased by relatively few investment dealers and this is understandable since mortgage-backed securities are outside the normal activities of these companies. Their participation is expected to increase once more of them have had the opportunity to gear for the handling of this type of investment.

There are other investors who would be willing to participate indirectly through the purchase of debentures, guaranteed certificates or other "paper" backed by insured mortgages. This provides an opening for development of private companies to bridge the gap between these investors and the sellers of mortgages. The companies would buy mortgages for sale to individual investors. Thus the small investor with only modest funds to invest could buy securities and participate in the mortgage market. There are encouraging signs of the formation of this type of company. In some cases they would act as subsidiaries for established financial institutions. Dealing specifically in mortgage-backed securities, their efforts would be directed towards tapping private participation.

A much more flexible approach to determining the maximum National Housing Act interest rate was a pre-requisite towards development of an active market in NHA mortgages. The rate would have to be kept in line with other long-term rates, even more so than in the past. Accordingly, the Honourable David J. Walker, at the time he announced the development of the secondary market for NHA mortgages, proposed a semi-annual review by the Government of the NHA interest ceiling, having in mind the long-term yield on Government bonds prevailing at the time. About six months later, on November 6, 1961, the Minister announced that maximum rates of interest for a variety of projects that may be financed under the National Housing Act, were being reduced. The announcement meant a reduction to 6½ per cent from 6¾ per cent in the maximum interest rate that may be charged on NHA loans for home-ownership and rental housing.

CMHC is confident that a secondary mortgage market, carefully and properly nurtured, will in time have a most significant impact on Canadian financial markets and, in particular, on the future of the house building industry in Canada.✦✦✦

Des collectivités satellites ne cessent de croître dans le voisinage immédiat des grands centres urbains du Canada.

LA VIE SUBURBAINE

L'accroissement fantastique des zones résidentielles suburbaines en Amérique du Nord est un phénomène marquant de la dernière décennie. La soudaineté avec laquelle ce changement s'est produit est décrite tant bien que mal par la rengaine suivante: "Je me souviens bien qu'il n'y a pas si longtemps, ces zones n'étaient encore que des terres en culture."

Nous connaissons tous les principales causes de ce déversement de la population vers la banlieue—l'accroissement continu de la population urbaine aux dépens de la population rurale; le développement sans précédent de l'industrie; et enfin, notre dépendance toujours croissante de l'automobile.

Un déplacement aussi marqué de la population devait inévitablement créer de nombreux problèmes. Des milliers de personnes dans tout le Canada sont en mesure de nous dire d'après leur propre expérience, ce qu'un tel changement a pu représenter pour eux et leur famille. Les maires, les conseillers municipaux, les législateurs, les experts en circulation, les bâtisseurs, les urbanistes et les ingénieurs se sont tous attelés à la tâche en vue d'apporter une solution au problème très complexe qu'a créé cet exode, et ils sont encore loin de l'avoir résolu.

Nous devons, toutefois, admettre qu'on a beaucoup tardé à recourir au planning et que des dommages considérables étaient déjà faits par suite de décisions mal avisées et du manque de coordination; en effet, chacun essayait de trouver une solution immédiate au problème qui le touchait d'une façon plus particulière. Mais, même le plus clairvoyant des prophètes aurait été incapable de prévoir entièrement la tournure que devaient prendre les événements. Ce que nous prenions tout d'abord pour un simple caprice, pour un état temporaire d'agitation et de démembrement des populations urbaines était devenu pour nous un nouveau mode de vie.

Les citadins qui affluaient vers les zones suburbaines à la recherche d'une nouvelle forme de liberté, devaient cependant accepter en retour plusieurs désavantages. La plus grande difficulté à laquelle le nouvel habitant des banlieues devait s'adapter n'était sans doute pas son nouveau mode de vie sociale, ni la fatigue physique résultant d'un long trajet à parcourir vers son travail, ni le pelletage de la neige en hiver, mais le fait de s'habituer à une

Ci-dessus — parmi les facteurs qui contribuent à favoriser le déplacement de la population vers les zones suburbaines, il y a l'amélioration des routes d'accès.

Les citadins qui affluent vers les zones suburbaines, y sont attirés par les grands espaces libres et une nouvelle forme de liberté.

nouvelle vie économique. Il lui fallait maintenant se conformer à un nouveau mode d'achat à tempérament, hypothéquer d'avance son salaire pour des decennies en vue d'embellir et de mécaniser sa maison, s'acquitter du paiement des mensualités au compte de sa propriété et de son automobile—ou de ses automobiles, si son niveau social lui permettait d'avoir deux voitures. Bien que le citadin dût lui aussi subir les conséquences de la transition qui s'était produite dans les méthodes d'achat, celles-ci touchaient d'une façon plus sensible le nouveau propriétaire-occupant de la banlieue, qui avait dû verser une mise de fonds fort élevée pour s'y établir.

Le taux peu élevé des taxes dans les zones suburbaines fut l'un des attraits qui ont influé en premier lieu sur la décision du citadin d'aller s'y installer. Mais à mesure qu'augmentait le nombre de personnes qui construisaient en bordure des cités, le besoin des services publics s'accroissait aussi rapidement, si bien que le montant des taxes sur les propriétés suburbaines arriva souvent à dépasser celui que ces nouveaux propriétaires avaient payé précédemment pour leur ancienne propriété du centre de la ville. En effet, les banlieusards exigeaient les

mêmes services qui existaient dans les secteurs plus anciens de la cité—i.e., des rues pavées, des égouts sanitaires et pluviaux, des écoles modernes, et plusieurs autres commodités qu'il fallait payer.

Les projets d'habitations en banlieue qui, au début, ne constituaient d'habitude que quelques groupes isolés à la périphérie des cités ou dans les municipalités avoisinantes, se fondirent graduellement en une seule agglomération par suite de l'achat des terrains qui les reliaient et de la construction de maisons sur ceux-ci. En bordure de ces projets, d'autres projets ont commencé à prendre forme. Des municipalités avoisinantes se sont alors amalgamées en vue de former des circonscriptions administratives plus pratiques et se transformer peu à peu en un grand centre communautaire que l'on appelle une région métropolitaine. Aujourd'hui, la famille qui, il y a dix ans, avait déménagé en zone suburbaine pour s'éloigner de l'atmosphère congestionnée d'une cité, se trouve pratiquement dans la même situation qu'auparavant, soit dans un milieu urbain qu'elle avait essayé de fuir.

Afin d'empêcher que cette vague de construction en zone suburbaine se répète indéfiniment, certaines municipalités ont adopté des mesures de protection. La cité d'Ottawa, par exemple, a réservé une bande de terrain connue sous le nom de "ceinture de verdure" pour en faire une zone-tampon. Tout projet de construction de logements suburbains devra dorénavant être entrepris au delà de cette bordure restrictive qui s'étend sur une largeur de deux milles à partir des limites actuelles de la cité. Cette mesure n'a pas été prise en vue d'empêcher l'aménagement de zones suburbaines, mais plutôt pour contenir la cité proprement dite dans ses limites. Cependant, l'impulsion de sortir des régions très populeuses est loin d'avoir diminué, et de nouvelles agglomérations surgissent déjà à la bordure extérieure de la ceinture de verdure.

Des collectivités satellites ne cessent de croître dans le voisinage immédiat de la plupart des grands centres urbains du Canada, malgré une tendance qui commence à se manifester en faveur du retour aux appartements qui sont construits au centre même de nos grandes cités. Le perfectionnement progressif de l'automobile en tant que véhicule qui peut être utilisé durant toute l'année et que la rigueur de nos hivers ne peut plus immobiliser, ainsi que les routes d'accès améliorées qui restent carrossables pendant toute l'année, sont autant de facteurs qui contribuent à entretenir ce déplacement de la population vers les zones suburbaines.

Un autre facteur qui contribue à l'émigration urbaine, c'est tout simplement l'habitude acquise. Nous n'exprimons plus la distance du centre de la cité en termes de coins de rue mais en milles. Les premiers habitants des zones suburbaines étaient des pionniers, mais aujourd'hui, le long trajet à parcourir vers la ville fait normalement partie de notre vie quotidienne. Le temps requis pour nous rendre au centre de la ville et en revenir est, en effet, notre façon de mesurer cette distance.

Tant que les inconvénients et les restrictions qui lui sont imposées par la vie de banlieue ne l'emporteront pas trop fortement sur les autres avantages, réels ou imaginaires, dont jouit le banlieusard par comparaison avec le citadin, l'attrait des grands espaces libres continuera d'attirer les familles vers la périphérie de nos ville. Aussi longtemps que le résidant des zones suburbaines aura les moyens de payer le prix qui lui est demandé pour cette parcelle de liberté—i.e. la liberté de tondre son propre gazon, de posséder sa propre entrée de cour, son propre patio et barbecue—les zones suburbaines continueront de se développer.

Les années cinquante ont été la décennie de l'exode. Les années soixante seront probablement la période de stabilisation au cours de laquelle les banlieusards commenceront à se fixer en une classe qui sera aussi distincte que celle à laquelle appartiennent les secteurs réellement urbains et ruraux de la population. Par conséquent, toute une nouvelle génération de jeunes gens grandissent et n'auront jamais connu un autre genre de vie. Pour ces jeunes ainsi adaptés à ce nouveau mode de vie, la question d'habiter les zones suburbaines ne présentera pas les mêmes problèmes que pour ceux qui ont vécu les années héroïques de la dernière décennie.✦✦✦

"THE POLICIES AND REGULATIONS OF MUNICIPALITIES UNDER WHICH WE MUST OPERATE ARE ANTIQUATED..."

Mr. Trouth is a B.Sc., P.Eng. from the University of Alberta. He is General Manager of one of Calgary's largest house-building and development companies. Mr. Trouth is Past President of the Urban Development Institute, Alberta Division, Vice-President of the Urban Development Institute of Canada and a Director of the National House Builders' Association.

LAND DEVELOPM

by N. S. Trouth

The relatively new process of private land development has progressed as rapidly and successfully in Alberta as anywhere in Canada. The Province of Alberta has probably the best Planning Act and Subdivision Regulations in the nation because the Act is liberal, the Regulations are permissive and allow for the acceptance of unique proposals of considerable scope.

The Urban Development Institute (Alberta Division) and Provincial and Municipal representatives have progressed to a position of very cordial relations. It is understood by all that we have a mutual interest in the orderly and economic development of the province. Many of our comments and suggestions for innovation or change have already been incorporated into regulations and legislation and our members have been invited to attend and participate in the annual Provincial Planning Conferences. The land developer is slowly being recognized as something other than a speculator.

The Town and Rural Planning Act and the Provincial Regulations are new to cope with new problems. Conversely, we find that the policies and regulations of Municipalities under which we must operate are antiquated and do not properly apply to modern development methods. A land developer interested in promoting new and better subdivisions must run the gamut of these local regulations and policies before receiving the open-minded approval usually received from the same plans under the Provincial regulations. This does not mean that Municipal officers are against our proposals, but that the regulations restrict their approval.

I think it is fair to say that ten competent planners could turn out ten different layouts for a subdivision each of which would be perfectly satisfactory and of reasonably equal economics. Nevertheless, it is the developer's lot at this time that three or four consecutive planners in the municipal, provincial and Central Mortgage and Housing Corporation planning departments all examine in fairly minute detail his plan, which has been carefully worked out with a full knowledge of the local problems and conditions. One or more of these very competent planners often make suggestions for change and quite often these suggestions are sound, but quite often they are not because of lack of knowledge of the detailed conditions. Since time is money, all this does is add to the cost of the development without materially improving the scheme.

The recent advent of the "general plan", if properly used, offers a tremendous time saving device for the average developer. In this plan the municipal authorities establish general restrictions and limitations, which are always necessary to provide proper relationship between subdivision and the municipality at large, together with the over-all use established for the area. Then, if the above mentioned planners would confine their interest to seeing that the developer's scheme follows sound planning practice and regulations, and conforms to the general plan, weeks and months of time and many dollars of planning costs could be saved, all of which would accrue to the benefit of the ultimate home owner.

Municipal Councils must be primarily interested in protecting the rights of the individual. Unfortunately, the developer is not often considered to be an individual. To do this, such devices as the Zoning

(Continued on page 22)

"IF ALL PLANS WERE DESIGNED BY QUALIFIED PLANNERS, A GREAT DEAL OF LOST MOTION COULD BE AVOIDED..."

During the war, Mr. Martin served four and one-half years with the R.C.A.F. in England and the Mediterranean Theatre. After the war he received his Master of Architecture in Community Planning from the University of Manitoba in 1950. He then joined the Planning Division of Calgary where he is now Director of the Planning Department of that city.

ENT IN CALGARY

by A. L. Martin

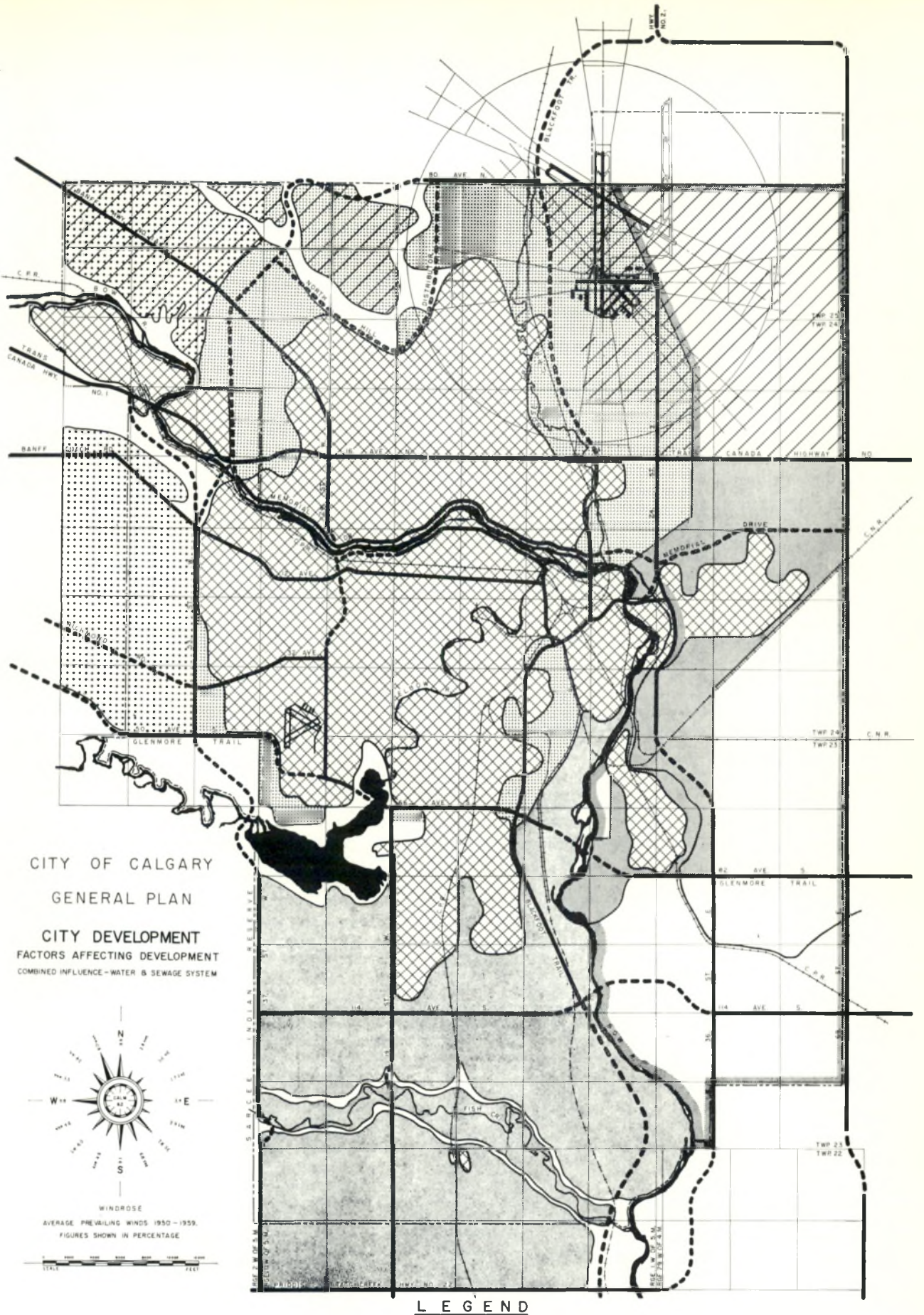
In 1945 Calgary had a population of 95,484 people who occupied a developed area of 25,180 acres and lived in 34,000 dwelling units. By the end of 1961 the population had reached 242,000, the occupied area was 97,800 acres and the number of dwelling units had increased by an estimated 43,000 of which 36,596 were single-family houses. This sustained expansion pushed residential development well beyond the 1945 incorporated limits of the City and engulfed in the process all of the partially developed fringe areas and the adjacent town of Forest Lawn. In 1945 the area within the incorporated City was 39.3 square miles; by the end of 1961 this area had swollen through successive annexations to 150.3 square miles.

Calgary was the only one of these Metropolitan communities which was well provided with urban services and utilities. The others had only partial services and none of them had sewer and water systems. Water in the fringe communities came from individual wells and sewage disposal was by means of outhouses, chemical toilets or septic tanks.

By 1960 all of the urbanized parts of the Metropolitan Area had piped water and sewer, mostly by means of extensions of the City's systems, although Forest Lawn had its own sewer and water systems prior to amalgamation with Calgary.

Very little planning control was exercised over the Metropolitan Area or, for that matter, in any of the municipal units comprising the area. Local planning legislation consisted of a zoning by-law for Calgary with none of the other units having any planning legislation. In Calgary the planning function was carried out by a very small division of the Engineer's Department and this constituted the only planning staff in the Metropolitan Area. No plan, even in outline, existed for any of the municipal units and no groundwork had been laid for a plan on a metropolitan scale. Subdivision control for the entire area was exercised at the provincial level. By 1950, however, the continued expansion had posed some serious planning problems and in that year the City's Planning Staff was considerably enlarged and work on a general plan for the City was commenced under the direction of a consultant. The studies undertaken in connection with the General Plan soon indicated that the rapid expansion would be sustained and would affect all parts of the Metropolitan Area. Meanwhile, the scope of the Town and Rural Planning Act had been enlarged to permit the establishment of district planning commissions, enabling several municipal units to combine their efforts for planning purposes toward a common objective. Pursuant to this legislation, the Calgary District Planning Commission was established in 1951 with representation from all of the municipal units comprising the Metropolitan area. This step saw the beginning of a co-ordinated effort to deal with the problems of expansion and particularly residential expansion on a comprehensive metropolitan scale.

It should be mentioned too, in this rather sketchy description of the immediate post-war background, that the pre-war depression and the war itself had built up a great backlog of necessary municipal works and found all municipal governments with only skeleton staffs in those departments which were concerned with expansion.


CITY OF CALGARY
GENERAL PLAN
CITY DEVELOPMENT
FACTORS AFFECTING DEVELOPMENT
COMBINED INFLUENCE - WATER & SEWAGE SYSTEM
WINDROSE
AVERAGE PREVAILING WINDS 1950 - 1959.
FIGURES SHOWN IN PERCENTAGE
LEGEND
EXISTING DEVELOPED AREA
EXISTING CITY LIMIT
WATER SERVICES
AREAS DEPENDENT UPON BEARSPAW WATER SUPPLY
SANITARY SEWER SERVICES
AREA SERVED BY BONNYBROOK PLANT (NORMAL PROGRESSION)
AREA DEPENDENT UPON FUTURE WEST PLANT
AREA SERVED BY FISH CREEK PLANT (MAJOR TRUNK EXTENSION FROM SOUTH TO NORTH)
INTERIM SERVICE BY EXISTING FOREST LAWN AND OGDEN PLANTS
AREA SERVED BY FISH CREEK PLANT (NORMAL PROGRESSION)

To summarize the foregoing, the immediate post-war period found Calgary and the Metropolitan Area with no physical plan to guide their expansion and with only skeleton staffs and sketchy administrative arrangements to deal with it. What was imperative, then, was the immediate preparation of at least an outline plan of expansion and there was little experience from which to draw the establishment of adequate administrative arrangements and procedures. As a guide to such action, the following indications were almost immediately apparent:

(1) The expansion boom occasioned by the discovery of oil at Leduc and the general trend toward urbanization would be sustained.
(2) The low densities of new residential areas would require large areas for expansion.
(3) Physical direction would be necessary for the projected growth.
(4) The expansion of the City would soon spill over the incorporated limits and that annexation or some other form of co-ordination, would be necessary.
(5) Enlargement of municipal staffs and reorganization of those departments concerned would be necessary.
(6) A change from local assessment for local improvements to prepayment would be essential to keep borrowing within reasonable limits.

EVOLUTION OF PROCEDURES

(a) *The Physical Plan*

By 1952 nearly all of the residential land in the City serviced by the existing sewer and water systems had been developed. In order to plan for future orderly expansion, it was necessary to examine new areas and to examine also the limitations of the sewer and water systems and how these could be expanded to accommodate the new areas proposed for expansion. The studies which were carried out then included a projection of population, an estimate of population densities based on typical post-war subdivisions and from these a calculation of the actual areas required for development. Meanwhile the City Engineer, working in liaison with this program, carried out studies on the economic feasibility of extending the sewer and water systems. On the basis of these combined studies, the City Planning Department prepared a report entitled, "Land Requirements for Housing the Metropolitan Population". The period for these requirements was 1953 to 1981 and the general method for planning this expansion has maintained its validity.

With the continuation of the boom, Calgary kept expanding over its boundaries and metropolitan problems became more acute. The City of Edmonton was experiencing similar problems and, as the combined population of the two cities began to approach one-half of the provincial total, the provincial government in 1954 appointed a Royal Commission to study the metropolitan problems of the two cities. The preparation of the brief by Calgary for submission to this Commission afforded an opportunity to re-examine the projected planning in the light of the continuing boom. The contents of this brief formed the basis of a General Plan for the Metropolitan Area which, with subsequent elaborations and refinements, has been the guide for residential development to the present time. The General Plan now being submitted to City Council incorporates all of the proposals contained in this brief.

With respect to residential expansion the principal recommendation of this brief was the complete amalgamation with the City of the entire area over which urbanization was projected, i.e. amalgamation of all municipal units in the Metropolitan Area. This would permit the projection of an orderly sequence of residential development based on functional requirements, the limitations of the sewer and water systems and balanced land-use relationships, In large measure these recommendations were embodied in the report of the Royal Commission and adopted as policy by the City. The stage was now set for the implementation of the physical plan and the recommendations described above.

The plan for residential expansion included the following:

(1) A projection of population and based on

this and the estimated residential density, an estimate of total land requirements.

(2) The distribution of the main areas of expansion, based on functional requirements rather than on political boundaries, to achieve balanced growth in accordance with the General Plan.

(3) The progressive extension of the sewer and water systems.

(b) *Implementation*

Altogether during the post-war period there have been six annexations to Calgary and these can be classified into three categories. Firstly, annexations were granted following application by some of the small unincorporated communities which requested in their applications the extension of the City's services and utilities. The applications by private land developers, who had purchased land immediately adjacent to the City and requested the extension of services, can also be placed in this category. Secondly, annexations of limited extent were granted following application by the City to make land available for residential development from year to year. Finally, there were the large scale annexations which were granted in accordance with the long-range plan for expansion described above. The last annexation which became effective at the end of 1961 included the Town of Forest Lawn.

As already noted, in 1953 the approving authority for all subdivisions in the City and the Metropolitan Area was vested in the Technical Planning Board of the City and the Calgary District Planning Commission respectively. This planning tool proved to be very effective; firstly, in giving positive guidance to residential development within the general plan, and secondly, in preventing premature breakdown into smaller parcels in areas which were scheduled for expansion. Multiplicity of land ownership is one of the greatest barriers to effective planning, but in this respect the Calgary area was rather fortunate. Although an earlier land boom during 1910-1913 had seen vast areas subdivided into lots and blocks, subsequent plan cancellations had restored most of the land which would be required for residential expansion to large ownerships. Furthermore, the City itself owned large tracts of land which it had acquired through tax forfeiture proceedings and this in itself proved to be very effective in guiding development.

PRACTICAL APPLICATION OF PROCEDURES

In their practical application, the general procedures described above required a standardization whereby routine channels of co-ordination were established among all of the civic departments, boards and utility companies which were concerned with residential expansion. These included the City Planning Department, the Engineering Department, the Electric Light Department, the Gas Company, the two School Boards, the Technical Planning Board, the Provincial Planning Advisory Board, the Central Mortgage and Housing Corporation, the Board of Commissioners and City Council. With this multiplicity of agencies, it was essential to establish a central clearing house for all projected development. The City Planning Department assumed this function described in the following four steps:

(1) *Development Programming*

With the outline general plan as a guide, the principal land developers purchased their land in the areas projected for expansion and this included land in all of the residential sectors. From year to year, the City Planning Department, in liaison with the Engineer's Department, prepared a yearly development program and map, the basis for selection of areas being as follows:

(a) Distribution of areas over different parts of the City to accommodate as far as possible the preference of customers and the requirements of developers and planning of these areas in accordance with an established neighborhood pattern.

(b) The availability of services and utilities.

(c) The relationship to existing development and particularly neighborhood development to minimize school, transit and other community problems.

(d) The relationship to existing and projected

arterial streets.

The program also included an estimate of the total number of building lots required.

The proposed program was then discussed with the City Commissioners so that the capital expenditures involved could be related to the Capital Budget. Meetings to which all developers were invited were then called and the proposed program presented. The purpose of these meetings was to compare the proposed program with the estimates of the various developers which would suggest modifications of the program. When general agreement was reached, the program would be used to guide the succeeding year's development.

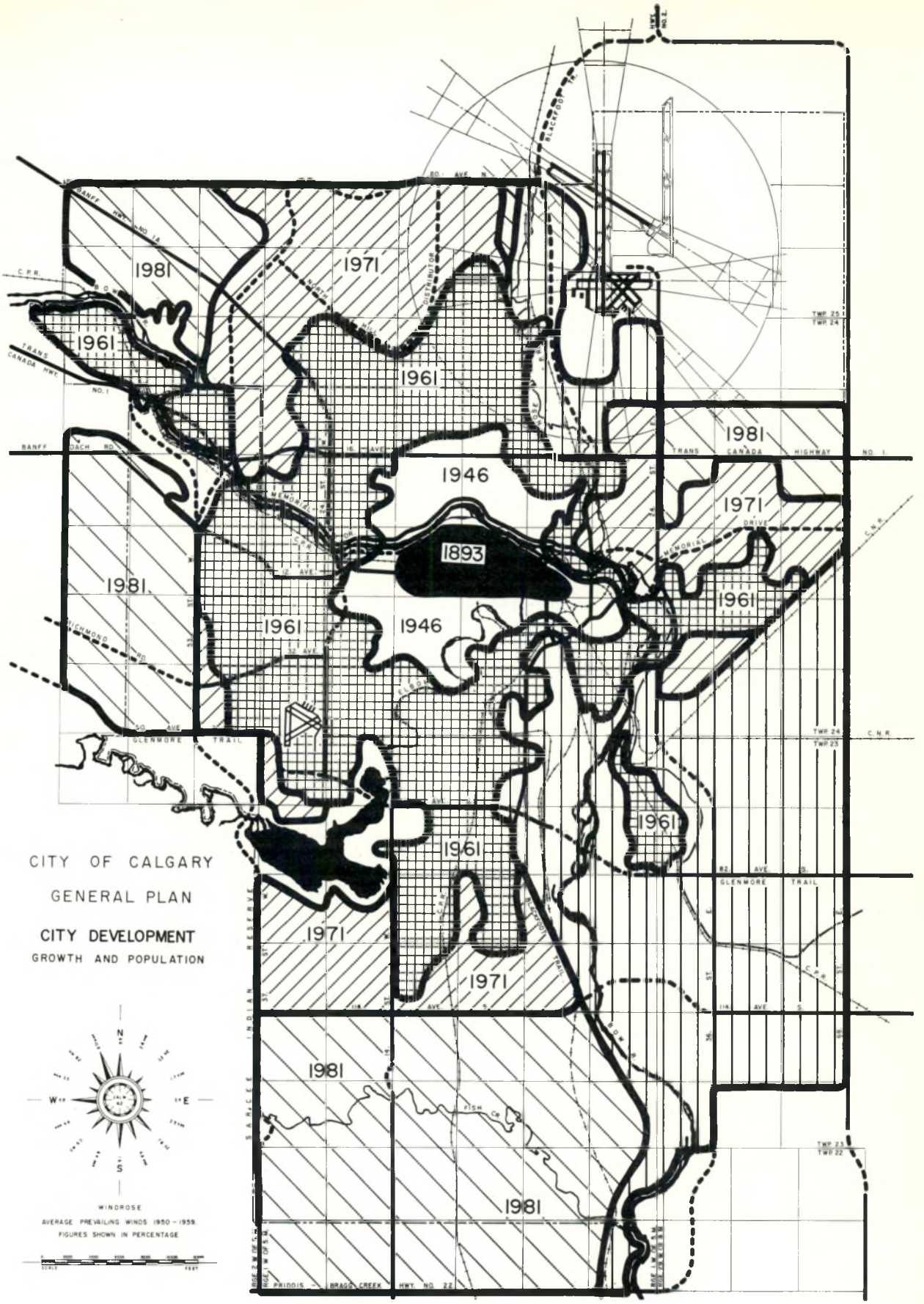
(2) *Subdivision Design & Control*

In Alberta all subdivisions are made pursuant to the Provincial Subdivision Regulations. In the cities where Technical Planning Boards have been established these are designated as the "approving authority". Similarly, in areas where District Planning Commissions have been established these are designated as the "approving authority" for all subdivisions within their areas of jurisdiction. In all other cases, the "approving authority" is the Provincial Planning Advisory Board. As already noted, in the Calgary Metropolitan Area there are two "approving authorities", viz. The Technical Planning Board for the City and the District Planning Commission for the other parts of the Metropolitan Area. Under the annexation program previously described, most of the land coming up for residential development in the Metropolitan Area was in the City and therefore the Technical Planning Board was the "approving authority". The only other residential development took place in the three towns —all members of the District Planning Commission.

Two steps ensue upon the submission of a subdivision plan by a surveyor to the Planning Department. Firstly, the plan is examined by the City Planning staff to ensure compliance with general plan requirements, including provision of school sites. parks, playgrounds, location of shopping centres, the segregation of traffic flow as between major and minor streets and general design standards. When these requirements have been met, the revised plan is submitted to the Technical Planning Board which accepts it for circulation to the various authorities having responsibilities to supply utilities, e.g., sewer, water, telephone, gas, etc. Secondly, the plan is reproduced in the required number of copies and circulated by the Planning Department among the agencies previously mentioned, each of which returns the plan with comments and suggested revisions. This part of the approval procedure is intended to ensure particularly the detailed technical requirements for all utilities. In practice the procedure might involve a meeting or meetings between the Planning Department and any or all of the agencies concerned. When all of the requirements have been reconciled, the plan is again revised by the surveyors and resubmitted to the Technical Planning Board in the form of a "tentative plan" for approval. Upon approval by the Technical Planning Board the surveyor prepares a plan of survey which when complete is submitted to the City for signature by the Director of Planning for the Technical Planning Board, the City Engineer, the City Clerk and the Mayor. The Planning Department then sends the plan of survey together with a copy of the "tentative plan" to the Director of Town & Rural Planning for his signature and the signature of the Director of Surveys. Following these signatures, the plan is sent to the Calgary Land Titles Office for registration.

(3) *Development Agreements*

Before 1953 practically all local improvements were capitalized and installed by the City, recovery being by means of local benefit assessments charged over varying terms, depending on the individual improvement or utility. In the light of the sustained boom, a projection of the borrowing which would have been necessary to continue with this procedure showed that the City would assume debts beyond its financial capacity to pay. Since 1953, therefore, the City has followed a policy of requiring prepayment of all local improvements installed in connection with new development. In practice this means that the improvements are installed by the developer at the time of development of his land in accordance with


1981
1971
1961
1946
1893
CITY OF CALGARY
GENERAL PLAN
CITY DEVELOPMENT
GROWTH AND POPULATION
WINDROSE
AVERAGE PREVAILING WINDS 1950 - 1959.
FIGURES SHOWN IN PERCENTAGE
LEGEND
POPULATION
CITY GROWTH ALL USES
..... UP TO 1893 2,560
..... 1893 - 1946 ..... 2,560 - 100,044
..... 1946 - 1961 ..... 100,044 - 241,675
..... EXISTING CITY LIMI
PROJECTED METROPOL. GROWTH
RESIDENTIAL AND SERVICE USES
267,870 - 432,827 ..... 1961 - 1971 .....
432,827 - 670,692 ..... 1971 - 1981 .....
FUTURE INDUSTRIAL (NO STAGING SHOWN)..

the terms and conditions of a development agreement entered into with the City, authority for which is given in the Subdivision Regulations. From rather sketchy beginnings this agreement has evolved into a formidable document with separate sections for each surface improvement and underground utility including curb and gutter, sidewalk, street pavement, lane surfacing, street lighting, water, sanitary sewer and storm sewer. The agreement contains an appendix of specifications for construction of the various works and a schedule of unit rates at which the City will pay its share of costs. Provision is also made in the agreement for the recovery by means of acreage assessments of capital costs incurred by the City for such installations as sanitary sewage mains and trunks, storm sewer trunks and new water pressure zones with their ancillary mains and reservoirs.

Each year the standard form of the agreement is submitted to Council for approval by the Board of Commissioners and once approved by Council all individual agreements are made in accordance with the standard form. Needless to say, the application of the various terms and conditions of the standard form can and does on occasion lead to protracted negotiations. An informal committee comprising the City Engineer, the Director of Planning and the City Treasurer scrutinizes each individual agreement. Points of disagreement are arbitrated by the Board of Commissioners.

Negotiations on the individual agreements are commenced as soon as the "tentative plan" of subdivision has been approved by the Technical Planning Board and in almost all cases the agreement is ready for signature before the date of approval of the plan of survey, which is the official date on which development may commence.

(4) *Zoning*

In 1952 Calgary's Zoning By-law was replaced by an interim development by-law which brought all development under the control of the Technical Planning Board. Part of this by-law consisted of a zoning guide which showed the zoning districts for the built-up parts of the City. Undeveloped areas were assigned an agricultural category. As new areas were planned and developed, the zoning guide was extended to cover the new zoning districts established in the neighborhood plans. This procedure provided a convenient means of overcoming the time lag between the registration of plans and commencement of development which is inherent in a zoning by-law requiring an amending by-law for every change from an agricultural to an urban land-use district. In other words, under an interim development by-law new zones are established by designation; under a zoning by-law they are established by amendment procedure requiring advertisements and public hearings with a 10 to 12 week interval between initiation of an amendment and third reading of a by-law adopting it.

In 1958 the interim development by-law was quashed through a court action and a new zoning by-law was passed which is now operative in Calgary. Amending by-laws are now necessary to establish new zoning districts which in a typical neighborhood will include single-family, two-family, multiple-family and local commercial zones.

Certificates of compliance and building permits may not be issued until the approval of the plan of survey and re-enactment of the by-law which establishes the appropriate zone have taken place.

It will be appreciated that with up to 12 land developers active in the City, each with a plan or plans in various stages of preparation, schedules have to be maintained to ensure a minimum of delays—but delays do occur. Most of these delays can be overcome by careful allocation of staff duties and responsibilities. In this connection the responsibilities of individual developers, their engineering consultants and surveyors, should be mentioned since lapses in their schedules occasion delays. Furthermore, only one firm has availed itself of the services of a qualified planner. If all plans were designed by qualified planners, a great deal of lost motion could be avoided. However, revisions to legislation also offer scope for further streamlining of procedures and thereby minimize the time interval between the first submission of the preliminary plan and the commencement of development.✦✦✦

(continued from page fourteen)

LAND DEVELOPMENT IN CALGARY

By-laws are designed to carefully but cumbersomely accomplish the policy, but Zoning By-laws should recognize the fundamental difference between a "spot zoning" amendment and mass re-zoning of areas conforming to the general plan. In the usual sense of the word, "spot zoning" is to a higher use which usually contemplates some hardship on surrounding property owners and elected representatives must examine the situation in minute detail to protect the rights of the citizen. But we submit, once a municipal council has approved a general plan for a segment of the city, the primary zoning of lands within this plan should be a quick, efficient, automatic procedure taking a few weeks to process.

There has been much discussion over the past few years of "density zoning" and attendant building regulations. This appears to be a scheme that goes well with mass development within a general plan, yet at the moment, I know of no municipality in which such a scheme has been approved.

Ten years ago municipalities provided sewer, water and light gravel roads in new areas. As the residents wished they could petition for sidewalks, paving, street lighting and other amenities. These they paid for by local improvement taxes and installation of these secondary services was slow and spotty. Municipalities did not promote the work because it required heavy financing. Slowly, as private development became more prevalent, developers, endeavouring to better their competitive position, promoted early installation of pavement and sidewalks. The cost was being carried by the purchasers of homes and the municipalities cheerfully agreed but, because they controlled the specifications and using the fact that they would inherit these works and the maintenance thereof, standards were steadily increased.

Concrete strengths were increased, paving standards were raised, road widths were increased and so forth. While the developers recognized that many standards did require change and improvement, it appeared to us that only the ones requiring additional costs were being approved. Consequently, the price of our finished product—the serviced lot—has been spiralling upward.

Many ill-informed sources have blamed this on SPECULATORS and URBAN SPRAWL. Figures will prove that three causes exist—

(a) an increase in land costs,

(b) an increase in number of services provided,

(c) an increase in standards of servicing—

and the (a) is only a small percentage of the total.

I submit that it is now time to make drastic changes in methods of servicing. The Institute of Urban Studies, newly formed, could well take on the task of research here. Rather than promoting higher density as a cure-all for high costs (and it is not), I suggest that we should find ways of allowing people to afford the larger plots of land they want in our great country.

Municipalities, I believe, use standards for water main design which are proposed by the Fire Underwriters Association. It is commendable that we should be protected from ever having a serious fire, but it seems possible that the group who is paying the losses might set high safety factors on the design.

A subdivision in Calgary with all services in place

The skyline of Calgary in the fifties.

I wonder whether alternate methods even with higher insurance premiums might cost the consumer much less and do the job adequately. Many primary water systems are designed so they can balance peak seasonal flow against peak use, yet mains are designed for peak use only. If, (a) water requirements could be reduced (the toilet is the worst offender) and (b) individual storage could be provided for peak use such as fire protection and lawn watering could we not then effect large savings in reducing the size and costs of mains?

In arid climates, provision is made for the control of surface water in times of flash flood. This may be ditches (often), underground pipe (seldom) and even depressed roadways. Water conservation authorities tell us that most of Canada could be classed as semi-arid. Why could we not carry the above principle right into our subdivisions and make provision for the extreme case (which may occur once in five years when no one is on the street anyway) in a similar manner at a tremendous saving?

Many other items could be investigated. I suggest that an examination of methods of servicing —keeping the cost of maintenance in its rightful place—could well cut the costs in half. Since servicing is some two-thirds of the cost of the finished product, the saving would be significant.

Be sure that I am not promoting the reduction of living standards. Remember that ten years ago there were outdoor privies in many parts of our cities. I only suggest that over enthusiastic non-paying municipalities may have overdone the improvements at unnecessarily high cost to the home owner.

To recapitulate, I believe that we, in Alberta, have the best planning regulations in Canada and that in fifty years, Alberta will be recognized as a model of good planning practice.

Nevertheless, if such is to be the case, the developers and the government authorities must continue their mutual efforts to rebuild municipal regulations so that they may properly suit the needs of mass private development.

Approvals must be streamlined; Zoning By-laws must be subdivided to allow for the protection of the citizen in the case of spot zoning, but, at the same time, to allow for the stream-lined zoning of mass developments; and a research program must be set up to study and promote drastic revisions of utility and service design standards.

If all of the above can be effected, the next decade will show phenomenal improvement in residential living standards in Canada.✦✦✦

L'INTÉGRATION DE L'ÉLÉMENT "NATURE" DANS NOS VILLES

par Georges Daudelin

Depuis très longtemps, les problèmes des espaces verts en général et des jardins en particulier a préoccupé, au cours des âges, différentes civilisations tant en Orient qu'en Occident; formes et apparences ont différé, selon les exigences des peuples et aussi selon le goût et la fantaisie de chacun.

En Grèce, les jardins s'intégraient dans la nature, se présentaient sous forme de vergers, où se cotoyaient orangers, oliviers, avocatiers, etc. . . . joignant ainsi l'utile, à l'agréable tout en restant hautement décoratifs. Ils servaient d'ailleurs intensément; la promenade très appréciée à l'époque autorisait dans le calme, les échanges d'idées philosophiques. Des cours s'y donnaient en pleine nature, maîtres et disciples en bénéficiaient dans leurs études.

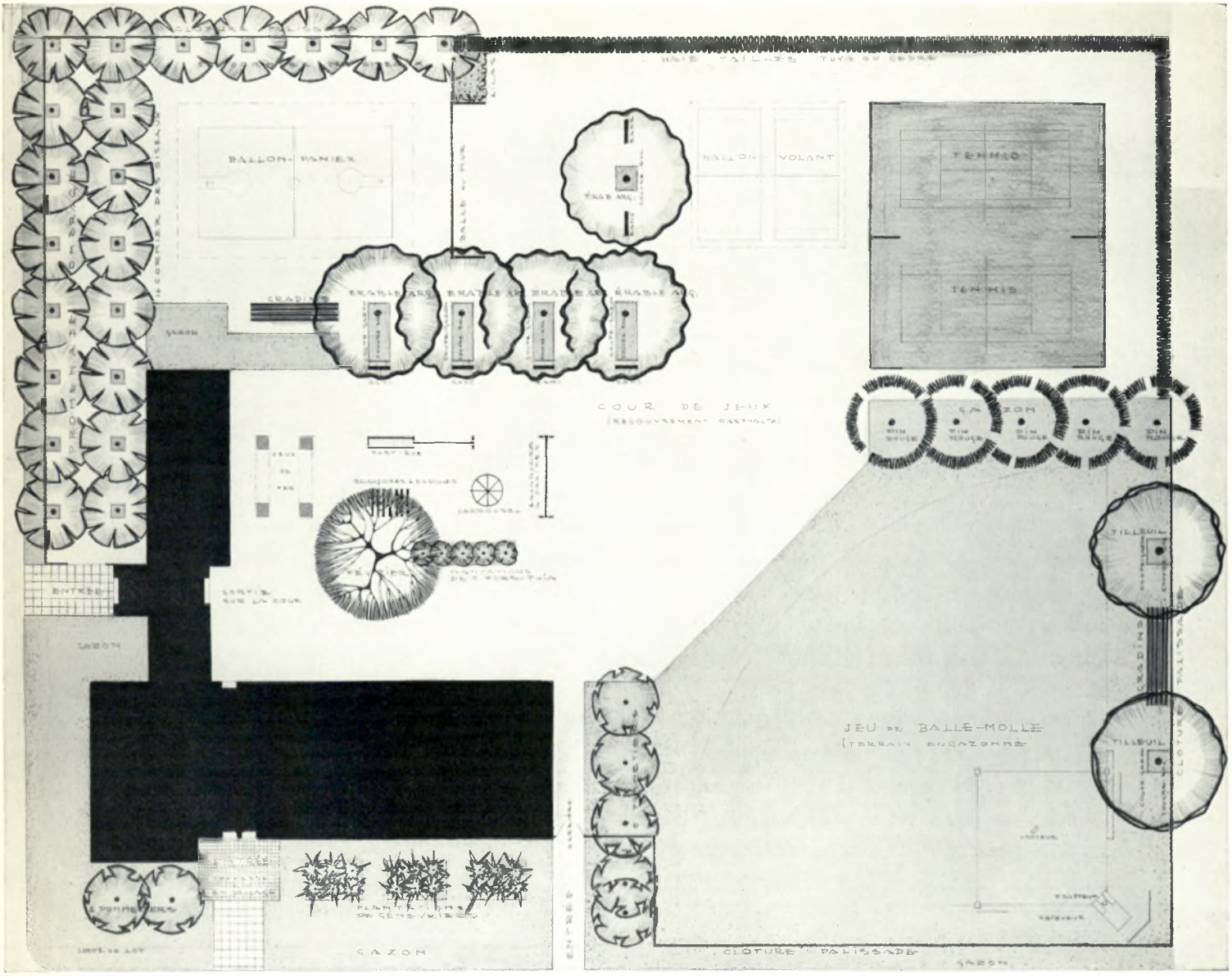
Les Romains ont amené les jardins publics dans les villes, jardins limités peut-être, où peu de végétaux y étaient employés; ils témoignent néanmoins d'un souci profond d'amélioration de la ville. Par contre les jardins privés, surtout ceux des patriciens, très élaborés, architecturaux, constituaient sous un climat qui l'autorisait, des pièces extérieures attenantes à la maison. Cette conception d'ailleurs représente ce que l'on tend à faire maintenant en certains endroits et avec plus ou moins de succès.

Babylone offrit ses jardins célèbres, appelés suspendus, parce que faits de terrasses ou galeries superposées; un peu à la façon d'un gâteau de noces, et sur lesquelles on aurait planté des arbres; l'eau était amenée à chaque étage par un mécanisme dissimulé dans les colonnes. Types de jardins destinés à une classe sociale excessivement aisée, et éminemment décoratifs, ils satisfaisaient eux aussi au besoin de verdure des hommes. Le coût de telles constructions nous paraîtrait exorbitant; si elles répondaient au besoin de faste de l'élite financière de l'endroit et du temps, elles n'en demeurent pas moins le témoignage d'une nécessité ressentie.

Les Japonais nous donnent un exemple de sobriété dans leurs jardins bien soignés, détaillés, rangés, organisés, chez qui en plus ils revêtent une valeur symbolique: chaque végétal a un sens: par exemple un pin tortueux représente un vieillard, quelques roches, une montagne et le sable ratissé, le lit d'une rivière. D'une minutie étonnante, les Japonais respectent la nature et ils le démontrent dans leurs jardins, fins et délicats comme des miniatures.

Chez les Français, on connaît surtout le jardin classique qui n'a pas été créé à l'usage d'un seul individu, mais pour les rois, les seigneurs et leur cour. L'ampleur que ces jardins ont prise reflète le goût du faste et de la grandeur; ils démontrent aussi l'usage qui leur était réservé: une cour nombreuse en empruntait les allées. Nous rencontrons là un des plus beaux exemples de civilisation; la discipline du tracé n'exclut point la grâce et l'on donne même aux végétaux des formes architecturales. Tout est calculé, mesuré, disposé pour atteindre une unité parfaite.

L'Anglais, lui, au contraire a voulu se rapprocher le plus possible de la nature, ce qui ne veut pas dire qu'il imitait, mais avec une certaine fantaisie, il créait des perspectives, des sites, des échappées dont les plus réussies se basent uniquement sur les arbres et les effets créés par l'utilisation d'essences différentes. En y intégrant, surtout à la fin du 19e siècle, des kiosques d'un certain style de goût douteux, on ne peut pas dire qu'il y eut amélioration. Ils y introduisirent des animaux, ce qui ne manquait pas



PARC-ÉCOLE La cour réserve beaucoup de place aux jeux puisqu'il s'agit d'une école primaire et de plus doit être accessible à la population en dehors des heures de cours. Malgré cette utilisation intérieure, la végétation retrouve sa place.

de charme; les cages se découvrant aux détours des allées, mais l'attrait change de nature à ce moment, le promeneur devient visiteur.

Les Italiens ont eu aussi leurs jardins dont certains bien conservés ne manquent pas de valeur quoique moins connus que le jardin français. Ils se rangeraient même dans cette catégorie, dont ils furent d'ailleurs les prédécesseurs. Plus près de la nature que le jardin français, il se mariait au paysage, il s'y intégrait et réservait des vues sur la nature environnante, tandis qu'en France se manifeste une certaine indépendance; le jardin se construit entièrement en dehors de la nature, le cadre est recréé grâce à elle jusque dans les perspectives.

Les jardins espagnols se rapprochent davantage de l'esprit méditerranéen: riches, reposants, colorés, ils disciplinent une végétation que l'on sent exubérante et généreuse. L'influence arabe joue son rôle chez eux. Elle se présente en général sous forme de décoration d'une cour intérieure, de passage, d'entrée

pour la maison; fenêtres et portes donnent dans cette cour appelée patio, où la fontaine centrale chante entourée de plantes disposées dans des vasques. Ils ont été conçus par les Maures et les Espagnols; les premiers, venus au Sud de l'Espagne ont importé ce style des jardins d'Afrique du Nord; le raffinement provient de la superposition de deux civilisations, l'une très artistique, très sensible, très émotive, l'autre plus ordonnée. Les jeux d'eau ici et peut-être avec plus de besoin qu'ailleurs, apportent leur fraîcheur et leur gracilité; dans certains de ces jardins des canaux et bassins de différentes formes créent des sons musicaux, le long du parcours.

Cette très rapide incursion dans l'histoire nous montre l'importance accordée aux jardins, aux différentes époques et chez les différents peuples qui ont représenté en leur temps "la civilisation". Les jardins, les caractèristiques relevées nous le confirment, ont même constitué une forme d'expression de leur constructeur, une manière de s'exprimer infiniment subtile et agréable, que ne répondrait pas seulement à un besoin esthétique, mais à des nécessités sociales, hygiéniques et économiques.

De nos jours comme jadis, le principal but est d'amener un peu de la nature chez soi. Plus nous allons, plus ce besoin se fait sentir, parce que nous vivons dans des villes de plus en plus mécanisées, de moins en moins adaptées, de moins en moins soucieuses de celui pour qui elles existent: l'homme. L'espace vert apporte ce repos que l'on cherche à la campagne; il crée une ambiance, constitue un attrait. Sous la forme de jardin il doit être conçu selon les exigences de chacun et l'endroit où il se situe.

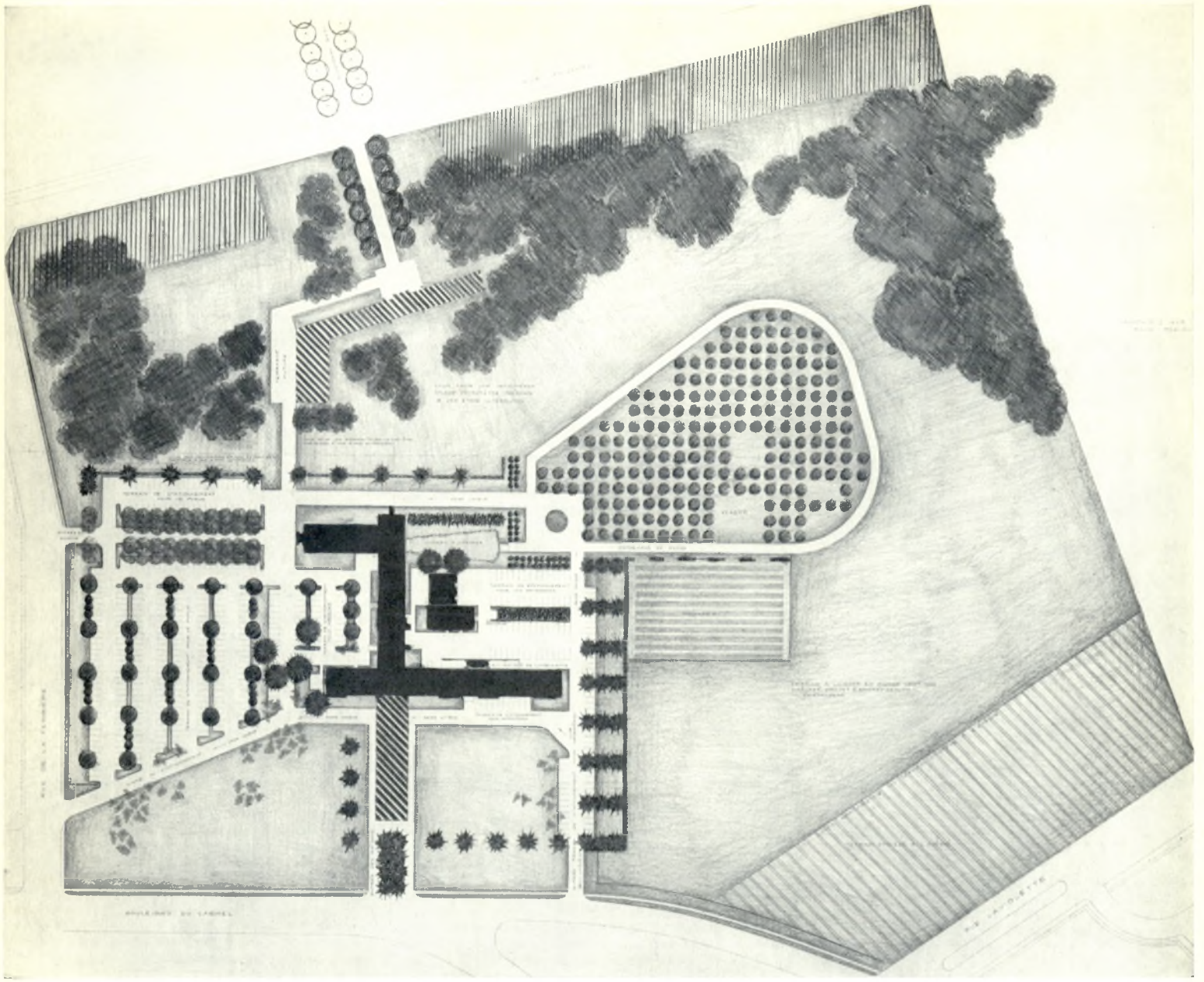
Malheureusement, dans la ville moderne, la nature a perdu tous ses droits au profit du béton et de l'acier, et les seuls jardins organisés ou à peu près ne se retrouvent qu'autour des hôpitaux, asiles pour déments, sanatoria et dans les cimetières, soit quand il est trop tard, parfois définitivement.

Tout le monde s'accorde à dire que la ville doit laisser place à la verdure, cependant il y a loin de la parole à l'action, et l'on trouve toutes les raisons pour supprimer l'existante et n'en point recréer. Les arbres nous apportent beaucoup, ils silhouettent une ville, lui donnent l'unité qu'elle n'aurait pas sans eux, cachent certaines laideurs architecturales et en plus ramènent l'échelle humaine en des endroits qui l'ont perdue. Songeons aux larges avenues bétonnées de Montréal. La verdure rend plus vivants les boulevards, les arbres donnent de l'ombre aux passants, servent de cadre aux perspectives, créent une atmosphère d'intimité, apportent la vie, ne serait-ce que par le spectacle de leurs parures saisonnières. L'aménagement des boulevards, des places publiques, des parcs, de toute la voirie en général gagnerait à être étudié, pour redonner une âme à la cité impersonnelle, âpre et laide que nous connaissons.

Un autre genre d'espace vert se présente sous forme de parc. Le parc endroit de promenade et de repos par excellence s'écarte davantage de la voirie, il la fuit. Différents styles peuvent le caractériser; ici il est généralement composé d'allées irrégulières, de collines, de bassins ou étangs. Pour certains parcs plus particulièrement destinés à la promenade, on s'attachera à créer des points de vue intéressants pour éviter l'ennui. Ombre et lumière ajouteront leur jeu à celui des couleurs, tandis que des éléments tels les miroirs d'eau, arboretum, cages d'oiseaux, y mettront une note de gaieté, d'imprévu et en accroîtront l'intérêt.

Certains parcs peuvent comporter des terrains de jeux, qui doivent être plus ordonnés et fonctionnels. On veillera à les clôturer puisqu'ils sont destinés aux petits. Les divers jeux seront répartis de façon à ne pas se nuire et à diviser les groupes d'âges différents qui ne se divertissent pas de la même façon.

Les jardins semi-publics bien qu'ouverts à un groupe déterminé de personnes seulement, comme les jardins d'institutions religieuses, cours d'écoles, et autres, participent également à l'ambiance urbaine en plus de leur rôle privé. Ceux-ci doivent être simplement composés, afin d'éviter l'entretien. Pour les écoles, on partira de la simple cour de jeux, ce qui n'exclut pas la plantation d'arbres au moins, et on continuera jusqu'au parc en tenant compte de l'âge des élèves. Les jardins d'institutions religieuses peuvent avoir une section pour le jeu, mais aussi des coins réservés à la méditation et au repos; on



HÔPITAL STE-MARIE, Trois-Rivières

L'aménagement paysagiste organise l'utilisation des parties actuellement nécessaires, crée le cadre et réserve les espaces autour des bâtiments pour les agrandissements futurs.

pourrait reconstituer les cours fermées des anciens cloîtres où à l'époque ne poussaient que des plantes médicinales et arbres fruitiers en espalier; à cela on pourrait apporter quelques changements tels que l'intégration de plantes d'ornement ou dans un pays comme le nôtre, cultiver certaines variétés de plantes qui ne sont pas suffisamment rustiques pour être exposées aux grands vents.

Les abords des églises peuvent être traités de telle sorte qu'ils restent sobres et contribuent à la

dignité et au recueillement des bâtiments qu'ils entourent. Les arbres de haute taille sont de mise, ils donnent l'élan, encore faut-il les utiliser avec discernement pour ne pas enlever de l'importance à l'église. Si le terrain est suffisamment grand, une aire de stationnement dissimulée à la vue par des arbres et des plantes sera aménagée. Le jardin du presbytère sera indépendant pour donner aux prêtres une certaine intimité et sera conçu avec régularité: allée couverte en forme de cloître, clôture de matériau naturel ceinturant l'ensemble.

Il est bon, dans un jardin même résidentiel, qu'apparaisse une dominante. Celle-ci s'inscrit dans la plus grande surface du terrain, souvent elle est faite d'une aire gazonnée, autour de laquelle s'ordonnent les différents éléments selon les goûts du propriétaire. Le principal d'entre eux peut prendre la forme d'une terrasse de repos, soit à fleur de terre, soit surélevée; couverte ou non elle doit offrir la plus belle vue sur l'ensemble. On peut y ajouter divers éléments tel, par exemple, un four en plein air. Une aire de jeux pour les ébats des enfants éventuellement avec balançoires, pataugeoire, carré de sable, cage à poule, etc. . . . tout cet équipement conçu de façon à pouvoir plus tard servir à d'autres fins; par exemple, une cage à poule transformée en treille, la pataugeoire en bassin décoratif et le bac à sable, entouré d'un banc, en un coin pour la lecture, etc. Tous ces jeux doivent être construits de matériaux choisis et peints de couleurs conservant une unité à l'ensemble, affirmant un caractère sans tourner au gâchis.

La fermeture des jardins et cours garantit l'intimité, marque le souci du détail, impose le respect du "chez soi" de chacun, montre la dignité de l'occupant qui entend prendre la responsabilité de sa propriété, et enfin différencie le caractère urbain de l'esprit rural.

Point n'est besoin de recourir à la palissade ou à la grille de fer forgé, alors que la nature nous offre le moyen de réaliser une barrière par la haie vive, sans heurter ni le sentiment ni la vue, d'élever un écran nécessaire à l'intimité sans arriver à la dureté du mur. Ce moyen par les avantages qu'il présente mérite une utilisation plus répandue; remarquons qu'il fut habilement exploité d'ailleurs dans les grandes compositions consacrées du passé.

Remarquons enfin que la haie, rien que par sa présence autour du jardin privé, apporte une masse appréciable de verdure à l'intérieur des îlots; ceci diminue d'autant la nécessité de plantation d'arbres; que grâce au compartimentage souple et agréable qu'elle assure, elle permet dans le style architectural, des différences, qui dissimulées par elle, ne compromettent en rien l'aspect d'ensemble du quartier, tandis qu'en son absence, le respect d'une unité impose à l'architecture de chaque maison des servitudes de style et de genre qui risquent au moins de conduire à l'uniformité.

Comme dit déjà, cette science revalorise dans les agglomérations les espaces verts et nous les présente sous de multiples aspects. Ils bénéficient ainsi de l'organisation générale de l'agglomération, et leur intégration à l'ensemble se réalise de manière à la fois harmonieuse et fonctionnelle.

Remplissant son rôle économique, social, hygiénique et esthétique, l'architecture paysagiste, élèvera le niveau de vie de l'homme aussi bien dans le matériel que dans le spirituel; leur dissociation dans nos cités depuis près d'un siècle, nous a conduits aux pénibles situations que nous connaissons.

Nul doute qu'ayant pris conscience du danger, chacun ne fasse l'effort léger qui nous amènerait une vie meilleure pour tous.✦✦✦

Monsieur Georges Daudelin a acquis une vaste expérience en architecture - paysagiste par suite des nombreux stages qu'il a faits, comme étudiant et comme employé, à Montréal, en Ontario, en Californie et en France. Il s'est ensuite associé à monsieur Georges Robert, urbaniste, pour ouvrir aux Trois - Rivières, un atelier d'urbanisme et d'architecture-paysagiste. Monsieur Daudelin est également l'auteur de nombreux aménagements paysagistes.

OTTAWA

The aerial view of Ottawa, looking north, shows in the centre one of the most sought after houses in the country in this election year — Canada's Parliament Building. In front of the Peace Tower is a lovely stretch of greensward flanked on either side by the East and West Blocks. Behind the Centre Block flows the majestic Ottawa under the Interprovincial Bridge on its way to the St. Lawrence. The river is dotted with log booms of the pulp and paper mills which are located across the provincial boundary in Hull, Quebec. On the far right centre a portion of the turreted Chateau Laurier can be seen and beside it the locks of the Rideau Canal stepping down to the river. This old commercial water highway, constructed by Colonel By, is still well travelled by pleasure craft. To the left and south of the locks is the War Memorial which forms the heart of Confederation Square. At extreme south of the picture facing on Elgin Street which runs to the War Memorial, is the Lord Elgin Hotel. Just to the north of the hotel also facing on Elgin is the New National Gallery of Canada. The other buildings in the picture are mainly private office buildings and stores, a part of the commercial portion of the Capital.

CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIETÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

HABITAT

JULY-AUGUST, 1962
JUILLET-AOÛT, 1962

The Calgary Stampede — this year marks the 50th Anniversary of Canada's most famous western spectacle. NFB

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RESIDENTIAL EDUCATION

New student dormitories at the University of British Columbia.

by G. T. Potter

The decision to make Federal funds available through Central Mortgage and Housing Corporation to universities, for the financing of the construction of students' residences, has given rise to a widespread interest in this aspect of university life. Certainly there can be no doubt that living in residence during academic training is of great benefit to the student, not only in the particular course he is pursuing, but as a broadening agent in that he can meet and discuss problems with scholars in other disciplines and from a different social origin than his own.

During my own student days in England I spent several years at residential schools and colleges and my memories of two of these centres stand out vividly as important contributions to my education.

The first of these memories is of Stanford Hall, Loughborough, Leicestershire where I spent two years as a residential student at the Co-Operative College. Once the eighteenth century residence of a county squire, the Hall had since passed through several hands and had been extended in a variety of ways. One wing had been added to provide for a badminton court and a patio, another wing had been built to provide, of all things, a theatre. At the end of the war, it passed from the hands of a private family to the English Co-Operative Union and at that time housed one hundred students.

Superficially, Stanford Hall was hardly the ideal college building. The rooms used as dormitories had been designed as lavish bedroom suites for the former owners. None of the public rooms were ever intended as classrooms and the kitchen facilities had never been constructed to provide so much, so often, for so many.

Despite these limitations, the building had been adapted for its new educational purpose and it fulfilled this purpose admirably. As one of eight students living in what had once been the nursery, I had an invaluable opportunity of living closely with students from all parts of the British Isles, studying a wide range of subjects and, since the college also offered a program of studies for overseas students, this community was enriched by a variety of cultures —from Iceland in the North to Ceylon and Malaya in the South and East. Every meal was an experience in international living; every day afforded an oppor-

tunity for discussions and comparisons of ways of life in different parts of the world. We relaxed on the lawns, swam in the pool and enjoyed many strenuous hours on the playing fields. Removed from the distractions of city life, we were able to devote many hours to intensive study and by the time examinations fell due, it was evident all had benefited from their varied experiences at the College.

On completion of my studies at Stanford Hall, I was awarded a scholarship to Oriel College, Oxford University and thus secured my introduction to my second major experience in residential education—so different in many ways and yet in so many other ways similar to my earlier experiences.

The first students began to assemble in the City of Oxford eight hundred years ago. At the outset, they lived as individual scholars, devoted to their own researches rather than to being taught. However, before long students assembled in groups, libraries were established and the nucleus of a university organization began to emerge. Local inns were converted into halls of residence, college authorities made new arrangements to accommodate their senior and junior members. The notion of the college as a community of scholars, living and studying together had finally emerged.

Over the centuries the pattern of college life at Oxford University has blossomed and matured. Admission to an Oxford College as an undergraduate is a gateway to a world of new experiences—to a unique intellectual challenge and to an enriched experience of community living within a body of students each pursuing their self-selected programs of study. The student of politics finds himself living across the stairway from the classics scholar; the scholarship boy from Wigan has rooms on the same staircase as the man from Eton and the younger son of the wealthy monarch of some exotic Kingdom. Only the most deep seated social barriers can survive in an atmosphere of this nature and before very long, all members of this group, despite their varied backgrounds and divergent interests, are exchanging views and developing opinions. It is in this climate, almost as much as in the tutorial or library, that the Oxford student achieves his liberal education.

As a newcomer to this select community, I was very soon captivated by it and delighted with the experiences that it provided. I still believe that it contributed fundamentally to my personal and intellectual development more than any other experience might have done and I prize my life-long membership of the Oriel College society very highly.

Let it not be thought, however, that Oxford lacks its disadvantages. Some observers feel that the university has not been the same ever since the mid-nineteenth century relaxation of the rules requiring that college fellows be unmarried. Since that time, more and more college tutors have exchanged their bachelor's quarters in college for the conubial bliss of a north Oxford mansion. They have had to contend with the manifold problems of rearing children and managing households with little energy remaining for their extracurricular college responsibilities.

Even those observers who feel that a married tutor can continue to discharge his college responsibilities adequately may be concerned about the impact of another major change in Oxford life—the consequences of the rapid increase in the size of the undergraduate population. In 1900 there were approximately 2,000 undergraduates at the university. Today there are upwards of 7,000. In the meantime, only a very limited addition has been made to college accommodation facilities. This means that colleges are overcrowded and that only a very few undergraduates can hope to spend more than one year living in college. The other two or three years must be spent commuting from lodgings in East Oxford or Headington with only a minimum of meals in college and hence a great dilution in the benefits that might derive from membership in this community.

These objections are indeed serious and require remedy. Little can be done to encourage the married tutor to devote more of his time to the college and, since space is so limited in the university area of the city, there is little prospect of any dramatic increase in college accommodation. Does this amount to an overwhelming case for restricting enrolment to its present level—or must the advantages of

college living be abandoned? My own prejudices will be evident as far as this discussion is concerned and I have faith that the fellow members of my college will take necessary action to offset any further deterioration in the situation.

It is some years now since I left the old country and came to North America to take up increasingly responsible positions in University administration. During these years, I have been in contact with a variety of university situations quite different from those that I knew in England and I have had to adapt my ways of thinking to the new environment. Thus I am now able to consider the question of "Residential Education" from a different standpoint.

On this continent we have the widest possible variety of university and college institutions. Some, such as Princeton and McGill, are North American counterparts of the older universities in England. Others are almost in the nature of mass production units attempting bravely to cope with the overwhelming responsibility of providing higher educational opportunities. Evidently the smaller institutions can elect to operate along the lines of an Oxford college if they choose to do so, but what of the larger institutions? How should they approach this question of "Residential Education"? Is it necessary that they provide facilities of this kind? Can they afford such facilities?

In some parts of Canada, notably in Alberta, the answer to these questions has been, by and large, that residences are not vital to the university situation. One result of this has been the development of fraternity houses which have afforded a few students a limited opportunity of community living, but from their very nature it has been impossible for fraternity groups to offer any general opportunity of this kind.

Although plans are now in hand to erect several substantial units on the Edmonton campus and a smaller group on the campus in Calgary, it is clear that these units will only serve a small proportion of the student population and that the majority of students will continue to live at home or in lodgings. Discussions about the residences centre more on whether or not they will be economic than on whether or not they might play a vital role in the life of the university.

A similar attitude, based mainly on economic considerations, is upheld in various parts of the United States where an extensive complex of Junior and State colleges is being established to meet the needs of students living at home.

I have every respect for arguments and arrangements such as these and it would be foolhardy of me, as a university official, to discount the forces that underlie the points of view that they represent. I would, however, like to give them further consideration and to draw what I regard as being important factors from this discussion.

Firstly, I would contend that the group who value residential university education relatively lowly on their scale of preferences have never been exposed to the advantages that it can offer. Either they have existed in the hotel-like institutions that sometimes pose as residences on some university campuses—stark giants full of washing machines, but devoid of common rooms for companionship and relaxation—or they have commuted to the campus from home.

Secondly, I would point to aspects of what is nowadays regarded as the crisis in higher education —to the gulf that is said to be emerging between science and the humanities and to the tension that exists between the "academic" and the "professional" schools on our university campuses. How can we overcome these tensions and bridge this gulf? If these questions are put to any academic group on the continent the answer that returns can be summed up as follows—we must secure better interdisciplinary communication, we must secure closer student-faculty relationships to counter the misconceptions that may nowadays arise in the mind of any student contemplating the highly compartmentalized organization to be found in most of our large universities.

We thus acknowledge a crisis in higher education and at least some of us advance the thought, based on our own experience, that properly devised university residences can afford at least a partial remedy to this crisis. We suggest that if residences are established on a fairly small scale (with many

small units rather than few very large units) with students of varied backgrounds and interests living together in close contact with a representative group of faculty members, then some of these barriers to communication will disappear. We suggest, moreover, that if such residences are established in prime areas of campus property—close by the library and with food service facilities to meet the needs of both residents and non-residents alike, then they will begin to feature in the life of the larger-scale university community in much the same way as the residential college features in the life of the more intensive college communities fashioned on the pattern of Oxford University. We might go even further and suggest that the establishment of a group of non-collegiate residences at the hub of a large scale university might provide a framework that will enable us to superimpose an interdisciplinary community organization upon a university structure that has built up inflexible barriers between departments and between students and faculty members. Surely there are enough elements in this case to justify enthusiastic experimentation and certainly the benefits that might derive are large enough to justify the expense that might be involved.

Whatever the success that may result from enlightened experiment in the development of residential university education, it is clear to me that this cannot represent our only attempt to overcome the crisis that I have discussed. There will remain many situations in which residences are only a partial solution and other situations in which this solution cannot be introduced for economic or other reasons. What can be done in these situations?

First of all, we must organize the faculty of such institutions in ways that will enhance interdisciplinary contacts and reduce rigid departmentalization. This suggests a divisional or non-residential college grouping in preference to the "departmental" grouping that now dominates most university situations throughout the world.

Secondly, we must arrange the schedule for students and faculty alike in such a way that they will have time for personal interchange. Too often the student has to rush from lecture to lecture in a desperate attempt to keep abreast of a full course load. Too often the faculty member has to face classes so large and with so little assistance, that the only time he is able to consider his students' individuality is when he is grading their final examination papers and he is attempting desperately to recall any extenuating circumstances that may justify a passing grade rather than a failure.

Thirdly, and last of all for the time being, we must arrange that when the schedule of students and faculty members have been restructured to allow them time to get together, that appropriate institutions should be developed to facilitate their interchange. This suggests that even on those campuses where residential facilities have been ruled unnecessary, there should be student-faculty centres located in strategic points, where all manner of formal, informal and community meetings might be arranged. Only in this way would the social distance between the faculty office or faculty lounge and the student union building be overcome. Only in this way could we recreate the benefits of the best of residential education for students who for various practical and other reasons were denied a direct experience of its advantages. May I suggest therefore, in conclusion, that in addition to the funds that it is now making available for residences, that the Federal Government might very well investigate the case for making funds available to assist non-residential universities to finance the construction of the kind of student-faculty centres that I envisage.✦✦✦

After graduation from Oxford University, Mr. Potter was a member of Oxford's Delegacy for Extra-Mural Studies. He came to Canada in 1957 to join the staff of the University of Alberta and is now Assistant to the President for Academic Affairs at Grand Valley State College, Michigan.

UN PROBLÈME SOCIAL, L'OGER NOS CITOYENS ÂGÉS

par Paul Vézina,

préposé à l'information

au bureau central

de la SCHL à Ottawa.

Un problème d'ordre social qui nous confronte aujourd'hui et qui mérite la plus grande considération de la part de notre société, est sans contredit celui de procurer à nos vieillards un sens de sécurité non équivoque.

Nos gouvernements sont conscients de l'importance primordiale de ce problème dans l'épanouissement de notre société moderne. Beaucoup a déjà été accompli pour donner à nos vieillards une place de choix dans notre société, mais néanmoins, nous devons malheureusement avouer que le travail qui doit être accompli presque immédiatement ne se fera que par la diligence et la compréhension que voudront bien apporter à ce problème les groupements religieux et sociaux de notre pays.

Quoique le but de cet article ne soit pas de publier des données statistiques, il faut tout au moins examiner quelques chiffres qui, après considération, seront de nature à nous ouvrir les yeux.

Un rapport préparé par l'Administration de l'Acte de l'assistance aux vieillards à la fin de mars 1960 est la source de l'information suivante. Il est prévu que vers la fin de 1965, le nombre de personnes ayant atteint l'âge de 65 ans représentera 8.1 p. 100 de la population canadienne. Alors qu'il n'est pas facile d'établir si les gens qui reçoivent la pension aux vieillards sont de la catégorie des vieillards à revenu modeste, il doit être admis qu'ils ont tous des caractéristiques bien distinctes. Puisqu'il est raisonnable de présumer que ce groupe possède environ les mêmes attributs que ceux qui comptent principalement sur une maigre pension mensuelle, ces chiffres fournissent la preuve sur laquelle nous pouvons nous appuyer pour déclarer que les besoins de l'assistance fédérale à la construction d'habitations pour les vieillards sont toujours grandissants. A la fin de mars 1960, près de 100,000 personnes âgées de 65 à 69 ans

recevaient la pension fédérale de vieillesse. Il est peu probable, par suite de la récente augmentation du montant de la pension, que les caractéristiques des bénéficiaires (tel le nombre d'entre eux qui sont propriétaires) changeront sensiblement. Du nombre ci-haut mentionné, la moitié étaient mariés, dont 58 p. 100 étaient des femmes.

Alors que 45 p. 100 des nouveaux bénéficiaires de pension en 1960 étaient propriétaires, 22 p. 100 vivaient avec des parents et 29 p. 100 louaient leur logement. Le reste de ces gens, soit un groupe moins privilégié, vivaient dans des institutions privées ou publiques. Puisque ces deux dernières catégories représentent le groupe qui est le plus admissible à bénéficier des avantages de la Loi nationale sur l'habitation en matière de logement pour les citoyens âgés, considérons leur problème plus en détail. Il est établi que les nouveaux bénéficiaires de la pension de vieillesse, qui se chiffraient par 8,169 en 1960, représentent une proportion de trois personnes sur dix qui vivent dans des logements loués, dont 3,286 dans des chambres seulement. Si nous répartissons ce groupe par province, nous constaterons que le Québec et l'Ontario sont les deux provinces qui méritent le plus notre attention. Les gens âgés aux termes de notre article, qui vivent en chambre, se chiffrent par 1,094 dans le Québec et par 1,082 en Ontario. Il est donc évident que le sort des locataires et spécialement de ceux qui vivent en chambre doit être traité d'une façon urgente; un effort concentré dans ce sens s'impose dans le Québec et l'Ontario. Nous devons avouer cependant qu'en Ontario, on s'est déjà prévalu de l'article 16 de la Loi nationale sur l'habitation et qu'en conséquence plusieurs projets à dividendes limités sont maintenant en pleine activité.

Même si l'auteur ne partage pas l'opinion de ceux qui estiment qu'une personne est devenue sénile à l'âge de 65 ans, il n'est pas moins vrai qu'à cet âge, l'homme est mis au rancart dans nos industries et nos commerces et doit céder sa place à quelqu'un qui est plus jeune et qui a des idées plus "à la page". Cette attitude de nos industries, aujourd'hui, prive notre société d'un des éléments les plus indispensables au développement de notre pays; 65 ans, c'est l'âge de l'expérience, de la maturité et de la stabilité. Si nous ne pouvons pas arriver à changer cette façon de voir les choses chez nos industriels, tout au moins avons-nous le devoir de rendre à nos vieillards la vie plus acceptable à l'encontre des injustices que leur fait la société.

Nos sociologues sont d'un commun accord à admettre que le problème est d'assurer à nos personnes âgées un sens de sécurité fondé sur leur désir d'être indépendantes et d'être en mesure de continuer à rendre à la société les mêmes services qu'elles ont dispensés toute leur vie, chacune dans sa sphère particulière; un tel privilège leur est parfois dénié, lorsqu'elles ont pris leur retraite.

Par tradition, et au Canada français en particulier, nos vieillards avaient une place dans la famille, même après avoir atteint un certain état d'invalidité, et pouvaient satisfaire leur amour-propre en accomplissant des tâches plus faciles. Aujourd'hui, nous devons déplorer un manque de reconnaissance et de sens du devoir de la part de la génération qui grandit. Les vieux en général et les parents en particulier qui ont atteint l'âge mûr, se voient mis au rancart et la vie familiale leur est plus ou moins deniée. Il s'ensuit que les vieux et les vieilles se voient alors dirigés vers des institutions communément appelées hospices. Voilà une retraite forcée qui est pour nos vieux très difficile à accepter. Qui n'a vu des vieux et des vieilles séparés les uns des autres pour satisfaire aux exigences de ces institutions, au moment où le besoin d'être ensemble n'a jamais été plus impérieux.

Conscient de cet état de choses, dont la cause peut être imputée à la malice ou à la nécessité des temps, le Gouvernement a mis à la disposition du peuple canadien, aux termes de l'article 16 de la Loi nationale sur l'habitation, certains avantages qui sont de nature à favoriser la construction de maisons et de logements pour abriter ceux qui désirent vivre heureux et en santé, dans une ambiance de cordialité familiale. En vertu de ce programme d'assistance financière que le gouvernement préconise, il espère

pouvoir inciter les sociétés à but non lucratif et les gouvernements municipaux à construire des logements à prix modique pour les citoyens âgés. A ce jour, dans un bon nombre de provinces canadiennes, des compagnies à dividendes limités ont déjà construit des projets de logements à but non lucratif et qui sont destinés à abriter nos vieillards. Aux termes de l'Article 16 de la Loi nationale sur l'habitation, le gouvernement fédéral, par l'entremise de la Société centrale d'hypothèques et de logement, fournit aux compagnies à dividendes limités des prêts à longue échéance, à un taux d'intérêt très peu élevé. (Le taux actuel est de 5⅛ p. 100, pour une période de 50 ans). Une compagnie à dividendes limités est une compagnie qui en vertu de sa charte d'incorporation et à condition de n'accepter que des dividendes qui sont limités à 5 p. 100 de son capital-actions payé, s'engage à construire des logements à bas loyer pour les personnes âgées. Ces compagnies peuvent être des sociétés de bienfaisance ou des groupements religieux qui ont à cœur l'amélioration des conditions de logement chez nos vieillards.

Plusieurs projets de ce genre ont déjà été réalisés à travers le Canada. En Ontario et dans les provinces de l'Ouest on a bien compris l'urgence du problème et la Société centrale d'hypothèques et de logement est toujours heureuse de prendre en considération de nouvelles demandes en vue de construire de tels projets, s'il lui est prouvé que le besoin de tels logements est réel. L'Est du Canada, cependant, ne s'est pas rendu compte de l'urgence du problème de la même façon, et il serait bon, me semble-t-il, que nous plaidions en faveur d'un programme d'éducation dans le domaine de l'habitation pour les vieillards, dans les régions du pays où ce problème social, non moins aigu qu'ailleurs, ne reçoit pas l'attention qu'il mérite. Nous sommes heureux, toutefois, de constater que des groupes sociaux, telle la Chambre de Commerce des Jeunes de Halifax, croient qu'il est possible de former de telles compagnies, afin de résoudre le problème de l'habitation chez nos vieillards.

Des octrois sont versés aux compagnies à dividendes limités pour la construction de projets de logements destinés aux personnes âgées, par

Projet à dividendes limités situé à Ville d'Anjou près de Montréal, où nos citoyens âgés peuvent jouir de la présence des enfants.

les gouvernements provinciaux de la Colombie-Britannique, de la Saskatchewan, du Manitoba et de l'Ontario. En Colombie-Britannique, par exemple, les octrois en capitaux ne dépassent pas le tiers du coût total du projet et la compagnie à dividendes limités doit fournir une mise de fonds égale à 10 p. 100 du coût total. Les trois autres provinces ont tracé un programme quelque peu différent, qui est quand même de grande portée et satisfaisant. La province de Québec n'a pas encore légiféré dans ce sens et les compagnies à dividendes limités se trouvent restreintes à un tel point que le petit nombre d'entre elles qui sont déjà formées accusent un déficit annuel. Une entente bilatérale entre le gouvernement provincial et les municipalités pourrait mettre un terme aux difficultés qui rendent le fonctionnement de ces projets presque impraticable, soit le taux élevé des taxes foncières et scolaires. En Ontario, un bon nombre de projets jouissent d'une exemption de taxes ou reçoivent une gratification annuelle égale au montant des taxes. Cette ligne de conduite en elle-même est de nature à favoriser la construction de logements à prix modique pour les vieillards. Ces compagnies à but non lucratif ne rendent-elles pas à

l'administration civique un service social dont autrement la responsabilité incomberait à l'administration municipale?

Nous lançons donc un appel aux groupements diocésains et sociaux du Québec, en vue de les inciter à étudier comment il leur serait possible de préconiser cette nécessaire et noble cause. Les groupements, tels les Sociétés St-Jean-Baptiste et St-Vincent-de-Paul, les Cercles Lacordaire et Jeanne-D'Arc, ainsi que les Chambres de Commerce, peuvent tous, en vertu de leur charte parrainer ces projets, sans être obligés d'investir d'importantes sommes d'argent. Citons comme exemple un projet de 16 maisons pouvant loger au total environ 32 personnes âgées: si nous supposons que le gouvernement fédéral par l'entremise de la Société centrale d'hypothèques et de logement consente, aux termes de la Loi nationale sur l'habitation, un prêt qui s'élève à 90 p. 100 du coût du projet, une somme d'environ $10,000 suffirait à mettre en mouvement tout le rouage nécessaire à la réalisation d'un tel projet. Les sociétés que je viens de mentionner et qui ont comme membres des hommes d'affaires avertis, pourraient facilement se constituer en compagnie et établir des fondations de charité, en vertu de la Loi provinciale des compagnies. Si la chose est possible dans plusieurs provinces de la Confédération, elle l'est davantage dans le Québec où par tradition et principe la bonne volonté des Québecois ne s'est jamais laissée surpasser en générosité. Comme dans le cas de l'oeuf de Christophe Colomb, les moyens sont simples, mais il s'agit d'y penser. Si nous voulons donner à notre société canadienne un état permanent d'équilibre et de stabilité, il nous faut toujours considérer en premier lieu le devoir que nous devons remplir envers nos citoyens âgés et la dette de reconnaissance que nous leur devons, quand il s'agit de leur trouver un gîte où ils pourront vivre heureux dans la paix et la tranquillité.✦✦✦

Situé sur le Chemin Cedar Hill, ce projet est parrainé par le club Kiwanis de Victoria. Il comprend 34 logements à une chambre et 8 logements-studios. Les loyers sont de $19 et $25.

OUR OVERHEAD BLIGHT

by Mr. G. Nordmann, the Chief Assistant Planner of Central Mortgage and Housing Corporation who is a member of the Town Planning Institute of Canada.

Considerable progress has been made in improving our urban and suburban areas in recent years, but there is a growing unanimity of opinion between the professions engaged in urban development—the architects, engineers, landscape architects and town planners—that a solution must be found to the blighting effects of overhead wires.

Technology has concentrated on producing an efficient, economical distribution system without having regard for the aesthetic aspects. With our varying climatic conditions though, can we really say that this system is efficient and economical as a long term investment? Over the years, storm damage to the equipment itself, not to mention disruption of essential services for long periods of time, must amount to a loss of many millions of dollars.

There are three components of electric distribution which intrude on the urban scene:

1. The wires themselves,
2. The structures required to raise them above the ground and
3. The ancillary apparatus which is necessary such as switching stations, sub-stations and transformers.

Many of us, however, have become so immune to the sight of this blemish (it is even prominently displayed on the reverse side of our dollar bills) that it becomes no longer visible to our eye, but a visit to some of the European cities, Washington, D.C., or sections of downtown Montreal, brings home the tremendously improved appearance of a townscape without wiring.

Since residential layout in North America has broken with the traditional grid form of layout, the visual and technical problems of overhead distribution have been intensified. The importance of trees as a unifying and moderating influence cannot be over emphasized, yet the effort of designers to save trees in new areas has often been nullified by the use of an overhead distribution system.

The switching and sub-stations surrounded by wire fences are an obviously alien element in the urban scene, but seldom is care taken to screen them with either walls or planting material. The hydro authorities must realize their responsibility to make their structures compatible with the surrounding development.

Street lighting cannot be ignored in any consideration of aesthetics and whereas many authorities now use well designed street lighting standards, the

general quality is not high and it is surprising how often wood distribution poles are still placed in the streets merely to carry lighting equipment.

The time has arrived when the distribution engineers must be prepared to collaborate with the other urban designers in improving the appearance of our towns and cities in addition to their normal function of providing an efficient service.

Credit must be given to a number of hydro authorities who have been quietly proceeding with underground installations in different parts of the country, but too many authorities still resist the idea because of cost or a reluctance to change their method of operation.

Most hydro authorities are prepared to install underground hydro at a price, but estimates of this price vary more widely than climatic and soil conditions would seem to justify. Only a short time ago a hydro authority stated that underground service to a single-family housing development would cost about $500 a lot but quoted a figure of about $250 for a rear lot overhead service. Overhead service from the street would be at no cost to the developer. These prices do not compare with other hydro authorities which provide underground service at less than $200 a lot.

Another problem which faces developers is that of the credit allowed for overhead systems when calculating the cost of underground services. On more than one occasion, the credit has been for the cheapest possible means of supplying power to the units irrespective of the fact that an overhead system could not be installed as designed for estimating purposes.

Central Mortgage and Housing Corporation recognizes that underground wiring is desirable. Where it can be demonstrated that the developer will be making a cash outlay for this type of service, thus improving the standards of housing, some recognition of this fact will be given when the lending value is being assessed.

There can be no doubt that the objective for

The service poles in these instances not only carry the wiring and necessary ancillary equipment, but are used as not too presentable light standards—not a very pleasant vista.

which we should strive is the complete elimination of overhead wiring from the urban scene. It will be a long process, but the ultimate realization of this objective could be hastened if all who are interested in the development of our urban and suburban areas were following a defined program.

Research

Although much research has already been carried out, a program undertaken jointly by the electrical manufacturers and distributors of electrical power should be directed towards solving the problems of underground distribution in ways suitable to our varying climatic and ground conditions at the most economical cost.

A critical examination of existing underground systems could provide evidence of their efficiency and lead towards some common standards of design. After reviewing estimates for a large number of underground proposals with great variations in cost, it would appear that some authorities tend to overdesign out of fear of the unknown. Such an examination may also give a firm indication whether or not economies of maintenance can be expected from underground systems. There is a wide divergence of opinion in this respect at the present time.

Programs

The Federation of Mayors and Municipalities could take the lead in encouraging municipalities and hydro authorities to set up planning programs for the gradual burying of existing wires in at least the downtown areas of our cities. These will of necessity be long-term programs because of the financial element involved, but unless there is a beginning there can be no hope of completion. Some cities have already made a start in this direction; London, Ontario and Victoria have programs underway and Red Deer, Alberta has enacted legislation requiring all high density developments and some of the suburban areas to be serviced underground.

Redevelopment

Our cities are now experiencing a period of growth which can be expected to increase in the years ahead. This will result in a substantial expansion of residential areas and the need for a greater concentration of use in our central areas. Concurrently with this expansion, our municipalities are realizing that parts of the cores of our cities are becoming worn out and that there is a need for redevelopment. In fact, nearly every major city in the country, with assistance provided under the National Housing Act, is having studies made with a view to revitalizing these critical areas of our cities.

The studies will almost invariably show that there is need for a more intensive use of the land to be redeveloped because of its increasing value. It is at this stage, where a planned program of comprehensive redevelopment incorporating intensive land use is being planned, that provision must be made to provide services underground.

There are a number of high density residential redevelopment projects which have been completed with all wiring underground. To mention only four examples, the Jeanne Mance Project of 800 dwelling units in downtown Montreal, Regent Park South of 750 dwelling units in the heart of Toronto, Maclean Park of 160 units in the business section of Vancouver and Mulgrave Park of 350 units on the outskirts of Halifax.

If it is economically feasible to bury the wires in high density residential redevelopment projects, it is certainly possible to do the same in commercial

Opposite a pleasant residential area with no wiring in evidence.

Buried wiring in *public housing* at Mulgrave Park, Halifax.

redevelopment. We must ensure that when this second chance to develop our city centre occurs, we do not lose the opportunity to correct our mistakes of the past and create a better visual environment.

Suburban Areas

Although there would appear to be little hope of programming any work for the removal of overhead wires from our recently developed suburbs, developers and hydro authorities should be encouraged to investigate means of effecting cost reduction for more desirable forms of distribution than placing the poles within the street allowance. There are alternatives which are more pleasing to the eye than overhead wires strung down our suburban streets. As a first and obvious alternative, distribution should take place from easements along the rear lot lines as is becoming more common in new suburban areas.

A further improvement would be to have primary distribution lines and easements on the rear lot line with secondary distribution to houses and street lights underground. This system was used in Oromocto, New Brunswick with some success because screening of the primary system by existing trees was possible due to close collaboration between the engineers and the designers.

Hydro authorities should be working closely with the house builders and developers, together with their professional advisors, to evolve improved methods of suburban distribution where underground systems are not yet possible.

Again the ultimate objective should be an underground system and it is encouraging to note the increasing number of subdivisions being developed with underground wiring. But until the cost differential has been reduced, we cannot expect universal application of such an objective.

Equipment

Overhead equipment will be used for many years to come, but there appears to be little action being taken to improve its appearance.

Industrial designers should be encouraged to design equipment for electrical manufacturers and distributors which would be more pleasing to the eye than the present poles, transformers and other items of equipment. Judging from views expressed by the public across the country, they are becoming more aware of the appearance of these elements in their environment.

Finally, the electrical industry and the producers and distributors of electrical power have a responsibility to contribute toward the improvement of Canadian cities. Although others can help, it is only the electrical engineers who have the special skills necessary to evolve improved and economical methods of underground distribution. This is a real challenge and worthy of the skills of our professional engineers.✦✦✦

URBAN RENEWAL IN HAMILTON

by D. G. Emslie

Hamilton's Urban Renewal study was conducted in 1958 at a total cost of $28,000 of which 75% was contributed by the Federal Government through Central Mortgage and Housing Corporation. The study designated nine areas of the city as being appropriate for renewal activities and in 1959, the special Beach Committee of City Council made a formal application for Federal and Provincial assistance in the redevelopment of the first priority area—Crescent and Van Wagner's beaches. By this spring, almost all of the 200-odd properties on the 175-acre parcel of lakefront land had been acquired and cleared and the Council was well along with its plans for a $750,000 beach recreational development.

Meanwhile in January of 1961, the Council appointed a representative citizens' group as the Urban Renewal Committee, headed up by Chairman Kenneth D. Soble, a radio and television executive with a long record of community service.

One of the earliest moves by the Committee was to study the local situation in the light of renewal activities in other Canadian and United States cities. It soon became evident that the first priority area at the beach was quite probably the only one in the city that would warrant the total clearance technique, which up to this time had been utilized in this country.

In June, because of certain complications occasioned by a city and area transportation study, the Committee decided to turn its full attention to the number four priority district, a 275-acre area in the old north end of the city, bounded on two sides by the shores of Hamilton Harbor and on the other two by the main CNR line and by industry. In making this decision the Committee recognized the greater need for redevelopment in the second and third priority areas. It delayed action on these two districts only until such time as a decision is made on a possible expressway route through them.

At this point, the advice of officials from CMHC and the Province was sought and the first of a number of three level meetings was held on June 13, 1961. The opinions expressed by the officials concerned have guided the Committee ever since.

They pointed out that the renewal area was basically sound and that its chief problems were advancing age and the gradual creeping in of such blighting influences as heavy through traffic and industrial uses. They felt strongly that the district had an atmosphere and even a charm of its own because of the mixture of housing types and ages, the tree lined streets and the neighboring harbor with its own peculiar mixture of lake freighters, overseas ships and colorful pleasure craft.

The accent at every stage of planning has therefore been on preservation and improvement rather than clearance and replacement. And there has been an equally strong accent on public relations, with every attention being given to including the residents themselves in the planning.

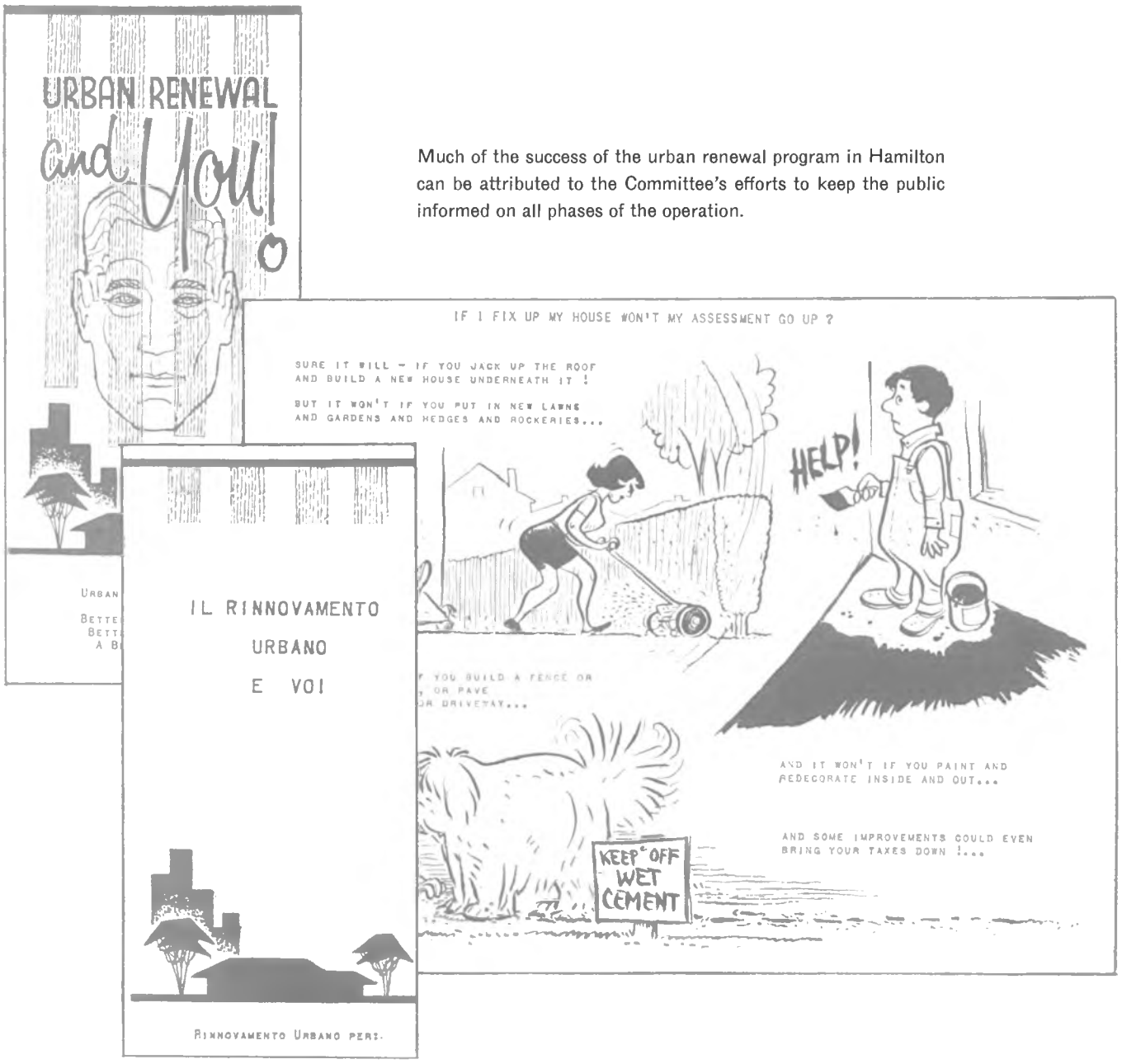
Buildings which will suffer complete demolition under redevelopment.

The result is a set of proposals which will involve a minimum of bulldozing, only that required to provide a new central school and recreation site, a perimeter road to carry the heavy traffic around the outer edge of the area and sufficient land for necessary relocation housing to be provided by both public and private agencies.

Special consideration has been given to section 36(1) (c) of the National Housing Act which provides for the acquisition and improvement of buildings in a designated area of redevelopment for housing purposes. A close search failed to reveal any instances of municipalities taking advantage of this section written into the act two years ago, but it appears eminently satisfactory for the type of renewal being contemplated in Hamilton.

By using some of the older homes for replacement housing, the Committee in fact feels that it can do two important jobs at one time. The homes will be improved in appearance, thus contributing to the overall upgrading of the area and at the same time suitable accommodation will be provided for many of the families displaced by clearance activities.

The Committee is also recommending one major variation on this idea, prompted by the experience gained in an earlier public housing project in Hamilton which saw former wartime houses moved to a new subdivision on the mountain, set on new foundations and completely rehabilitated. It is hoped that in this way the better homes in clearance



Much of the success of the urban renewal program in Hamilton can be attributed to the Committee's efforts to keep the public informed on all phases of the operation.

This beautiful old home will remain midst redevelopment.

areas can be shifted to nearby locations which have been cleared of badly blighted housing. This would preserve the housing stock and the relocated houses could be used either by their present owners or as replacement housing.

As well as direct government action in the field of rehabilitation, the project envisages a great deal of private improvement work. One of several leaflets prepared by the Committee and distributed throughout the renewal area, tells home owners the number of improvements they can make in their properties without occasioning higher assessments and taxes—a major consideration in this area or any other.

Also in the final stages of preparation is a project which will see an individual home purchased and renovated as a sort of pilot house. It will then be opened to the public and visitors will be shown graphically how such work can be done and, equally important, how it can be financed by such means as Home Improvement Loans.

If the various proposals are accepted by the Ontario Municipal Board and if they earn the blessing and the participation of the Federal and Provincial governments, this fall could see the start of something new in the urban renewal field in Canada. An important advantage of the Hamilton proposals is that, with their accent on preservation and improvement rather than bulldozing, they could find wide application in cities across the nation.✦✦

Mr. Emslie was born in Brantford, Ontario, and has spent the greatest portion of his business career in the broadcasting industry. In 1953, he was appointed Director of News and Public Relations for Station CKOC, Hamilton. He left this position in 1961 to become Executive Secretary, Urban Renewal Committee of the Corporation of the City of Hamilton.

THE HOUSE IN ITS NEW SETTING

by Albert Potvin, the Alberta Regional Information Officer for Central Mortgage and Housing Corporation.

When we speak of the House in its New Setting, we not only think of the house as a small world around which the life of a family revolves, but the structure itself and its immediate environment, its external appearance, the parcel of land on which it is situated, the street on which it fronts and the collection of residential buildings of which it forms a part. To obtain a true picture of the changing pattern of living in urban communities, we must consider both facets.

In the home, the transition to the push-button era has been accomplished so gradually that it has become part of our way of life. A child brought up in a modern home cannot conceive of it ever having been otherwise. Pressing an electric switch has become a ritual that precedes the majority of household functions. And we are coming to the point where it is not even necessary to push the switch. We can enjoy even temperatures and humidity in the home without getting up from the armchair. We have home laundry facilities that know when to start and stop and wash, rinse and dry. Our kitchen ranges will come on and cook a roast and bake a cake while we are not even in the house and, if we do not return when expected, will keep the meal nicely warm until we do arrive. Our garage doors can be made to open as we approach them, with no effort on our part.

Probably the most revolutionary change in the pattern of living within the memory of most of us is the link of communication established between the seclusion of the home and the community outside; first through radio and now through television which brings into our living room an animated picture of the world in which we live and outer space.

With all the innovations, it would almost seem we have reached the saturation point in home gadgetry, but the electrical companies and appliance manufacturers have prototypes of the home of tomorrow that make our present abodes seem as old fashioned as the homes of our grandparents.

Although we do anticipate some additional changes in the inner sanctum of the home in the foreseeable future, we can expect much more definite alterations in the complexion of residential communities as well as in the composition of the city as a whole. Within the precincts of the home, we have adjusted to the changes and work-savers of the past few decades because they have generally made life easier, although a psychiatrist might disagree on this point. Considered on an urban scale, on the other hand, alterations in our way of living have had some very disturbing effects, creating new problems some of which are still a long way from being solved. The variety of solutions offered in some cases constitutes a greater problem than the problems themselves. Some of the best minds which have been put to work on these questions often disagree as to what the proper remedies should be. Parking, traffic congestion, extension of municipal services, the redesigning of access arteries and the handling of the ever-increasing municipal debt and finding the means of financing new undertakings remain pressing problems in most of our large urban communities in Canada.

The main factors which will influence and precipitate urban changes are the increasing use of the automobile as a private means of travel to and from work; the soaring land costs and the diminishing supply of available building property; a growing metropolitan concept of civic administration; new federal, provincial and municipal housing legislation; the availability of private funds and the channelling of investment money.

The designer and architect along with the land developer and the builder, who are the key men in the housing industry in a private enterprise society, will of course continue to share in the responsibility

of shaping our living quarters and their surroundings. In the end, it is the home owner himself who will decide where and how he will live. Will he insist on having a house of his own or will he be satisfied with rental accommodation? Will he be willing to have shared amenities? Will he want his own backyard, his own front lawn, his own driveway and his own garage? Through his elected representatives at the municipal, provincial and federal levels, he will decide whether his tax money will be used to subsidize housing for low income groups, for capital works and other public expenditures.

His decisions, in turn, will be influenced by his earning power and what portion of this can be spent for shelter; how much annoyance he is willing to put up with travelling back and forth to work; what degree of responsibility he feels toward his neighbor's welfare; and how he prefers to spend his leisure. Not the least among the deciding factors is the part the distaff side will play in the family administration. If it has been said that the woman is the "repository" or keeper of tradition, she is also the one who more quickly realizes the advantages of a better shopping service, better educational facilities for children and what is generally in the best interest of the family's welfare. Realtors and builders have long recognized that the final decision in the selection of a home usually rests with the woman and their sales appeal is mostly directed towards her.

One of the more difficult factors to assess in determining the housing trend is fashion and its prestige value. In the late forties and early fifties it became fashionable to move to the suburbs into a brand new house with a brand new mortgage and drive a brand new car bought under the easy-finance plan. Now, living in a luxury uptown apartment seems to be the thing to boast about. It may be that the same status seeker who moved to the suburbs a decade ago to set up his castle in some exclusive residential "heights" will be the first one to head back to the city.

Of course, fashion itself is built on certain tangible values. If the new high-rent apartments in centre town did not offer some very definite advantages along with the newly conferred status, they would find few takers. When the builder who is planning to erect such an apartment asks himself if this will be an economic venture, he is really asking himself: "Will the customer buy this idea?". It may be more profitable and cause less worries and squabbles with the various authorities to put up a 100-apartment building a few blocks from the heart of the city than to build a hundred homes in the outskirts. But with the high cost of land and rigid construction specifications, he will have to set the rents at a higher level than the average family is willing to pay. For the type of customer he seeks he will have to provide the best in conveniences, appearance and comfort. And it is on these extras and the price that must be paid to enjoy such amenities that prestige is built.

The luxury apartment in centre town will compete more and more with the better home in the suburbs. Other more modest apartments are also being built not too far from the city centre, but owing to sky-rocketing land prices in these areas the more expensive type of accommodation is the one that will assure safer economical returns.

At the other end of the social scale we have the Government-sponsored high-rise apartment, built with public funds, and with rents partly subsidized by the taxpayers' money. Residential blocks of this type now form part of the skyline of downtown Toronto and Montreal. To what extent these examples will be followed by other cities is still not definite. Certainly, the need for better housing facilities for the lower income segment of our urban population cannot be argued. The National Housing Act provides for Federal assistance in the erection of this type of multiple dwelling in co-operation with a provincial government and the municipality.

However, the notion of public housing also is still somewhat foreign to Canadians and we might add distasteful to many. Even where everyone recognizes the genuine need for subsidized accommodation, there is a wide division of opinion as to whether the families involved should be housed in high-rise buildings on valuable land in the heart of

On the northern slopes of the Saskatchewan valley, just below Edmonton's busy downtown commercial district, older homes are making way for new apartment housing. The winter protected construction in the foreground was unveiled shortly after this picture was taken.

the city. Most of the rows of neat, attractive high-rise apartments found in European cities have been built with some form of Government help. In other parts of the world also, this type of accommodation appears to be one of the answers to their housing problem. Of course the population densities in these countries are relatively high. Will the rapidly changing demographic pattern of our Canadian cities eventually bring about a revision in the space standard for residential purposes and force acceptance of the higher rise formula in housing?

Only yesterday we would have said so. But just as the flight to the suburbs was a protest against the cramped urban living conditions of the war years, and just as the return to the downtown area is a reaction against some of the burdens imposed by life in suburbia, so are we having second thoughts about the massive lodging of families in stacks of neat cubicles with private balconies. There is some genuine concern about the possible overpopulation of certain downtown urban areas if the trend towards concentration of eight and nine-storey apartment buildings in these sections continues and we are already searching for a cure against what was to be the cure-all of our residential problems.

It may be that the architects responsible for the initiation of this type of massive accommodation were carried away by the simplicity of the idea as well as by its aesthetics. But the high-rise residential building which was designed for specific housing conditions in other countries may not exactly fit our needs here in Canada. Architects and designers who are responsible (perhaps more than they recognize) for the form of living we adopt are proposing an alternative, a compromise solution between high-rise, centrally-located apartments and so-called wasteful detached family units on single lots. This is the gardencourt type of housing, a pattern of multiple dwellings in some less populated section of the city where land is cheaper. Lower density accommodation can be provided with more outdoor space than would be possible in centre town. The buildings—two, three or four storeys high—occupy a relatively smaller portion of the land and the unoccupied portion is developed as a common garden or playground.

We have not yet explored to any extent here in Canada shared ownership of multiple units, an arrangement common in certain European countries and which is slowly being adopted in some U.S.

The gardencourt type of housing, Toronto.

cities. Each tenant pays his own maintenance and tax expenses. Should he wish to move, his built-up equity has a merchantable value. Co-operative ownership and management of multiple dwellings may become of increasing interest to Canadians as an antidote against the exclusiveness of rental accommodation in higher density urban areas. However, there is no sign as yet that we are ready for this form of common ownership.

There is no danger of the suburbs becoming ghost communities. In fact, with the filling up of the vacant land between the city proper and the suburbs, these sections are being fused with the outlying sections of the old city and are losing their identity as separate areas. Thus, the fringe municipalities in time become identified with the metropolis to which they have become physically welded. The inevitable result is a metropolitan form of civic administration.

The suburbs will continue to flourish and will remain the choice of many home seekers. There is a stable element in this sort of community. As urban amenities are provided to the fringes—water and sewer services, paved streets, local shopping centres, kindergartens and high schools—they will provide an equalization factor which will reduce the spread of advantages between the older established residential sections and the new. Another improvement that will give added status to these new communities is the creation of wider access ways and throughways which will greatly reduce travel time to and from the city centre. Our notion of distance has already been greatly modified in the past few years. What seemed like the other end of the world a short while ago is just next door today and the suburban dweller thinks little of driving ten or fifteen miles to work in his all-weather automobile provided he is not frustrated by traffic congestion along the way. The time factor, and not the distance, becomes the criterion when establishing the suit-

Dept. of Highways, Ont.

A constant stream of vehicles at the 5:15 rush-hour.

ability of a homesite. With speeded up access to these newly populated communities, there will be builders and investors to promote construction of multiple housing units of the gardencourt type or attractively designed row housing and walk-up apartments on parcels of land still unoccupied. Along the newly opened main arteries, we will see more of these stylishly-designed commercial establishments and shopping centres that blend architecturally with the surroundings catering to neighboring residents as well as to evening shoppers and out-of-town trade.

In the United States the Federal Government's multi-billion dollar highway program, it is said, will be the key to untangling what they call "the urban mess". It will be the planning centrepiece of every metropolitan area, providing rapid access to the city centre and detouring through traffic around its boundaries. In Canada we have nothing on this scale as yet, but a number of large cities and many smaller ones now have bypass highways. Metropolitan

Work has ceased for a period of meditation on the street of one of Vancouver's suburbs.

The 13-storey Grandin Towers, Edmonton's first true high-rise residential building, is located at the corner of 100 Avenue and 111 Street in what was formerly referred to as Edmonton's West End but now considered part of the city centre.

Newton

The City Park Apartments in the heart of downtown Toronto.

centres like Montreal, Toronto and Winnipeg are either building or planning new access ways to open up the traffic bottlenecks between the city centre and the outlying communities through six lane drives, overpasses, subways and elevated highways. Not only will this help the residential communities already established in the suburbs, but it will give a new dimension to commuting. Satellite communities fifteen, twenty and even thirty miles away will be no further from the city centre, taking travel time as the unit of measurement, than were the outskirts of Winnipeg or Edmonton twenty years ago when people had to rely on streetcars to get to work.

Smaller towns in the neighborhood of large cities have already felt the impact of this opening up of arterial highways. In may cases, the municipalities concerned were not prepared for an influx of new dwellers and their rapidly expanding residential sections, while providing them with added income, burdened them with servicing and borrowing problems they were not prepared to handle.

The core of the Metropolitan area—the city centre—takes on added importance as the focal point of a continually expanding marginal area. This is where the more radical redevelopment will undoubtedly take place. Every large city in Canada is due for a face lifting job through the Urban Renewal provisions of the National Housing Act. Where this has not already begun the measurements are being taken. Surveys on urban deterioration are now going on all across Canada. In Toronto, Windsor, Montreal, Halifax and Vancouver there is some tangible evidence of what all our large urban centres can expect before the end of the 60's. Of course urban renewal is going on piecemeal all the time. Older centrally located houses even though still in good structural condition must make way for new commercial buildings because the land on which they are situated has become more valuable than the buildings themselves. Gradually these are being demolished and in their place new steel and concrete structures are going up.

Will there be any room for residential units among these architectural creations of the new age? Will this be part of the new setting for family housing? As we have seen, there has been a definite trend in this direction lately. But there is nothing to assure us that high-rise buildings designed for residential purposes will not some day be converted into office buildings, just as many of the older homes close to the heart of the city are now being used as offices for doctors, dentists and real estate brokers. The outcome is intrinsically tied to the capitalization value of the building for either residential or commercial use and the initial cost which is inflated by astronomical land prices. Even our subsidized high-rise apartments may some day be rehabilitated in some more truly residential section of the city.

We can well suppose that the use of land both in the heart of the city and in the more sparsely occupied districts will be coming in for a greater measure of control and regulations. In the United States the local Housing Authority has the power to expropriate land and to plan, build, own and operate public housing projects. This, mind you, is in a country which is considered as the bastion of free enterprise. How much longer can we hold on to our privileges as individual homeowners and developers of urban property, we do not know. The private builder and land developer will maintain his franchise to the extent that he can co-ordinate his planning with public interest.

What will the city of the future look like? To this question we can only give a speculative answer. Any categorical statement would be presumptuous. There is no definite formula for predicting the course of urban development; we must rely on present trends. Very few of us could foresee twenty years ago the phenomenal expansion of our cities which was to follow World War II, though the combined factors that led to this development can be analyzed easily enough in retrospect. However, one item has been added to the cities of today which was sadly lacking 20 years ago—staffs of trained planners at the municipal level. Perhaps our cities of the future will be better planned, better co-ordinated and above all more pleasant places in which to live than anything we have known previously.✦✦✦

Château Ramezay - Notre-Dame est.

LA PRÉSERVATION DU PASSÉ À MONTRÉAL

Par la préservation du passé dans une ville, nous pouvons entendre à la fois: la conservation des édifices ayant le caractère d'oeuvres d'art et la conservation des édifices qui, sans être des oeuvres d'art, peuvent être considérés comme des "témoins du passé", témoins par le rôle qu'ils ont eu à jouer dans l'histoire, par l'importance des constructions, ou par la manière de bâtir et de vivre du passé.

Il existe en Europe quelques petites agglomérations anciennes, qui ont joué un rôle important il y a plusieurs siècles, mais qui par la suite, avec le déplacement des grands courants de commerce et de vie, ont été pour ainsi dire oubliées par le progrès. Notre époque, ayant reconnu l'intérêt que ces agglomérations présentaient, a décidé de les conserver et d'en faire ce que nous appelons des "villes-musées".

Il existe aussi des "quartiers-musées" dans certaines vieilles villes; ceux-ci n'ont pas subi de transformations appréciables, parce qu'ils n'avaient pas une situation favorable à cela, dans la ville en évolution.

Ce qui est arrivé dans la pluralité des cas, c'est que les villes prospères, non oubliées par le progrès, se sont développées et agrandies, non seulement par extension, mais aussi et très souvent par la reconstruction à plus forte densité, de leurs parties les plus actives dans les quartiers anciens. Dans les villes d'Europe, on a généralement réussi à préserver au moins quelques édifices ayant un caractère monumental.

Si maintenant nous regardons chez nous, à Montréal, nous voyons clairement une ville de commerce; c'est bien le caractère de notre ville en effet d'être une ville commerçante, d'avoir même été à ses débuts, un centre important du commerce de la fourrure en Amérique.

A cause de sa situation privilégiée et de son port, au carrefour des grandes routes fluviales et terrestres, Montréal n'a jamais été longtemps ou du

moins sérieusement dans un état de stagnation. Les agrandissements, démolitions, reconstructions ont été très actifs dans les vieux quartiers, et ce n'est qu'assez récemment, avec les facilités de transport et l'amélioration du réseau routier, que Montréal et plusieurs autres villes du continent se sont éparpillées sur une grande superficie.

C'est donc le progrès constant de Montréal qui a fait que de nombreuses constructions, présentant un caractère historique plutôt qu'artistique, sont tombées sous le pic du démolisseur. Il ne nous reste maintenant que peu de vieux bâtiments. Du régime français, à peu près rien; des bâtiments ayant quelque deux cents ans d'âge, un petit nombre seulement. En somme, on peut dire qu'il ne subsiste malheureusement que peu de témoins du passé.

La Rue Saint-Paul

Tournons-nous cependant vers des cas particuliers, la rue Saint-Paul par exemple, disons de la place Jacques-Cartier en allant vers l'ouest. A la vérité, nous ne trouvons que très peu de constructions vraiment anciennes sur la rue Saint-Paul. Son caractère particulier vient plutôt du fait que cette rue est très étroite, que son tracé n'est pas rectiligne, mais est plutôt légèrement incurvé, ce qui permet une vue variée sur des bâtiments relativement peu élevés et de hauteur assez uniforme. L'aspect est bien différent là, de ce que nous voyons ailleurs à Montréal. Les bâtiments de la rue Saint-Paul servent le jour au commerce et aux affaires, mais après les heures de travail, c'est le désert. La rue Saint-Paul est située dans une partie de Montréal qui est certainement en transformation et en reconstruction.

Ce qui pourrait se faire dans le cas de la rue Saint-Paul serait de lui conserver au moins une partie de son aspect actuel, en imposant, disons: la construction en ordre continu, une hauteur uniforme de façade à la rue, et un retrait pour les parties de constructions plus élevées. Nous obtiendrions ainsi un aspect semblable à celui qui existe, et les constructions nouvelles pourraient se marier facilement aux constructions existantes.

L'Ancien Hôpital des Frères Charon

L'ancien hôpital des Frères Charon présente un cas des plus intéressant. Nous avons là un bon groupe de bâtiments très anciens et en bon état de conservation. *Les alentours immédiats* peuvent être dégagés pour former un cadre de verdure, constituant un petit parc d'agrément, qui serait des plus apprécié, à l'heure du lunch par la population des nombreux édifices à bureaux du voisinage. Une partie des espaces ainsi dégagés pourrait même servir comme parc de stationnement.

Les bâtiments eux-mêmes pourraient recevoir une affectation mixte, comme: 1- servir de restaurant et de salle à manger auxquels on donnerait un caractère ancien par un ameublement et un décor appropriés; 2- ou encore servir de salles de réunion pour certaines sociétés.

Une partie des bâtiments pourrait également être convertie en musée historique pour compléter le Château de Ramezay qui est déjà bien rempli. Nous sommes persuadés que l'ancien hôpital des Frères Charon pourrait devenir assez facilement un lieu de visite très apprécié de la population montréalaise et aussi des touristes.

Le Secteur du Marché Bonsecours
et le Marché Lui-Même

Retournons plus vers l'est, aux alentours du marché Bonsecours. A cause de sa situation géographique et de son utilisation, ce très vieux secteur de Montréal a échappé, jusqu'à présent en tout cas, aux transformations importantes. Nous y trouvons un ensemble de constructions plus ou moins anciennes donnant tout à fait l'aspect des rues d'autrefois. Le marché Bonsecours est un édifice dont l'architecture est des plus convenable, et qui a été utilisé à beaucoup de fins en plus de servir de marché.

Le petit quartier compris entre la place Jacques-Cartier, la rue Notre-Dame, la rue Berri et le port, pourrait être réaménagé et ses bâtiments transformés en édifices à bureaux. Ce serait sans doute un projet viable, car les édifices à bureaux seraient en bordure du centre administratif municipal que l'on songe à créer entre les rues Craig et Notre-Dame, de Place Vauquelin à Berri.

Certaines vieilles maisons de ce quartier

pourraient être débarrassées de leurs verrues, réparées, améliorées et rafraîchies, pour servir ensuite d'habitations à un groupe de familles ou d'individus que je sais déjà intéressés à demeurer dans le cadre historique de ce territoire, à proximité de leur travail et dans la quiétude du soir. N'oublions pas non plus que les cinémas, théâtres et autres lieux d'amusement de la rue Sainte-Catherine sont à moins de 15 minutes de distance du secteur.

Enfin, l'intérieur des terrains de ce secteur, une fois débarrassés des hangars et constructions accessoires, fournirait de bons espaces de stationnement, accessibles par les portes cochères encore existantes de ces vieux bâtiments.

Le marché Bonsecours à son tour pourrait éventuellement servir d'édifice administratif pour la Ville de Montréal, ou pour les gouvernements fédéral ou provincial, après qu'on y aurait apporté les modifications nécessaires.

Il peut même servir encore longtemps pour des fins analogues à celles auxquelles il sert actuellement. En effet, si nous étudions l'entourage du marché Bonsecours, plus particulièrement à l'est de la place Jacques-Cartier, nous trouvons de nombreuses entreprises complémentaires du marché, telles que: magasins de graines de semence, de petits outillages de culture, et d'autres produits ou articles nécessaires à la ferme. Toutes ces entreprises ne pourront se déplacer que petit à petit. Le marché Bonsecours, étant solidaire des entreprises précitées, pourrait bien être maintenu lui aussi pour un certain temps encore comme marché.

Cette utilisation, comme marché, ne serait pas incompatible avec les transformations des bâtiments avoisinants en édifices à bureaux, mais il conviendrait alors de débarrasser le bâtiment même

A gauche, la maison Pierre du Calvet,
nord-est des rues
St-Paul & Bonsecours.

Ci haut, l'ancien hôpital des Frères Charon.

À gauche, le marché Bonsecours, rue St-Paul.

du marché des appentis et autres constructions accessoires qui le déparent, puis de réglementer son utilisation intérieure.

L'église Bonsecours, la maison Pierre du Calvet, la maison Louis-Joseph Papineau, l'hôtel Rasco

A part l'église Bonsecours, quelques édifices mériteraient une attention particulière, soit: la maison de Pierre du Calvet, celle de Louis-Joseph Papineau et l'hôtel Rasco. Ce dernier bâtiment est en très bon état, et il pourrait, le cas échéant, abriter un service municipal.

En résumé, il ne reste à Montréal que peu d'édifices vraiment historiques méritant d'être conservés, mais nous avons quand même un certain nombre de "témoins du passé". Il est souvent très difficile de conserver, et surtout d'utiliser, tout le problème est là, de vieux bâtiments dont l'âge est la seule caractéristique, lorsque ces vieux bâtiments sont entourés d'autres constructions ne présentant pas d'intérêt particulier, et que le tout est situé dans un secteur de la ville en pleine transformation.

A noter ici que dans ce bref entretien, nous avons traité du bas de la ville seulement, laissant de côté pour le moment, les anciennes constructions plus excentriques, telles que: 1- les tours de *l'ancien fort des Messieurs de Saint-Sulpice,* rue Sherbrooke, à l'est d'Atwater, fort érigé d'abord en 1677 puis reconstruit en 1694, ces tours étant ce qui reste du fort reconstruit, 2- l'ancienne maison de la *Ferme Hurtubise* construite en 1692 et encore debout à 561-563, chemin de la Côte Saint-Antoine, 3- l'ancienne maison de la *ferme Décarie*, édifiée en 1697 et encore debout à 459, chemin de la Côte Saint-Antoine; 4- la vieille maison des Soeurs de la Congrégation Notre-Dame, de 1698, soit la maison de la ferme Saint-Gabriel ou la maison de la Pointe Saint-Charles encore debout à 2146, rue Favard.

Urbanisme et Rénovation Urbaine

Maintenant, pour compléter ce que nous venons de dire, précisons le rôle de l'urbanisme qui peut contribuer à la préservation des monuments historiques et des "témoins du passé".

Pour commencer, *le dossier urbain* nous fournit des plans où l'âge des bâtiments est indiqué, ainsi que des plans d'utilisation du sol indiquant la situation des vieux bâtiments par rapport à l'entourage, de même que l'affectation actuelle des constructions.

La réglementation de zonage détermine à quelles fins les bâtiments peuvent être utilisés; elle fixe aussi les hauteurs des nouvelles constructions, et dans certains cas, les reculements et dégagements à prévoir pour les édifices projetés.

Les plans de l'aménagement du réseau routier prévoient, dans maintes circonstances, des élargissements de rues, et par conséquent les démolitions qui s'y rattachent. La manière dont ces travaux doivent être exécutés décide évidemment du futur d'un bâtiment historique: sa conservation ou sa disparition.

Le plan directeur des espaces libres nous met en mesure d'assurer le dégagement et la mise en valeur d'un édifice conservé, par la création d'un petit parc d'agrément par exemple, avantageux non seulement pour la vieille maison, mais tout autant pour la population des environs. En outre, un ancien bâtiment situé dans un parc peut servir au personnel de l'administration et de l'entretien du parc, ainsi qu'à ceux qui fréquentent le parc. Il n'y a pas que les constructions qui méritent d'être préservées, il y a aussi les sites historiques, c'est-à-dire certains emplacements ou terrains. Nous voyons ici le rôle essentiel du plan directeur des parcs et autres espaces libres; il n'est pas necessaire d'insister là-dessus.

Depuis quelques années la Ville de Montréal s'est engagée dans des entreprises de reconstruction et de réaménagement de grande envergure. Le projet original Dozois avec les Habitations Jeanne-Mance, est le premier exemple du genre.

Les grands travaux qui impliquent des élargissements de rues, la création d'espaces libres, la réglementation des constructions, peuvent donner le coup de grâce à de vieux bâtiments ou à des ensembles de vieux bâtiments. Le rôle de préservation de l'urbanisme est donc ici essentiel.

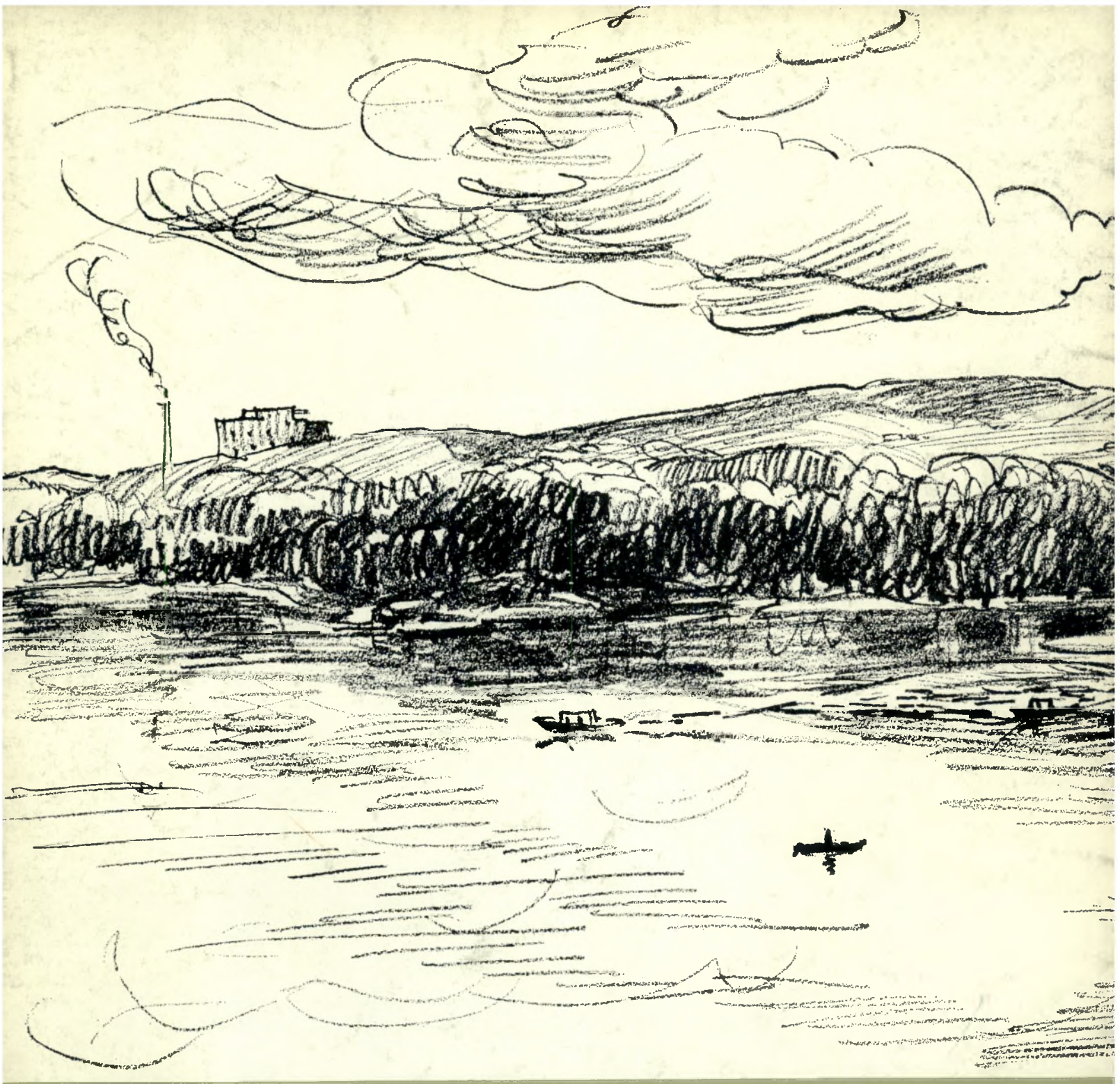
D'ailleurs, l'article 8 du règlement municipal N° 1682, qui a créé le Service d'Urbanisme en 1941, et qui est devenu l'article 5 dans le nouveau règlement 2593 concernant le Service d'Urbanisme, stipule que "Le Directeur fait dresser un projet d'aménagement municipal qui comprendra un plan directeur et un rapport exposant les principes de ce plan". Le plan directeur déterminera, conformément à un programme préalablement établi", *entre autres choses* (1) les emplacements destinés aux monuments et aux édifices publics, de même que (2) "LES SITES et LES MONUMENTS NATURELS, HISTORIQUES OU ARTISTIQUES À CONSERVER, DANS LEUR ÉTAT ACTUEL OU AUTREMENT."

De plus, le Service d'Urbanisme a formé, depuis plusieurs années déjà, le Comité de Toponymie et des Monuments Historiques, pour se pencher plus particulièrement sur certains problèmes de préservation du passé à Montréal.

Conclusion

En résumé, et pour conclure, nous pouvons dire sans soulever d'objection, qu'il est à peu près impossible de sauvegarder les vestiges du passé sans le concours de l'Urbanisme. C'est pourquoi je dis que cette science doit assurer le développement rationnel et fonctionnel de la ville et s'employer à préserver les sites, monuments et bâtiments historiques de notre grande et belle métropole, la Ville-Marie d'autrefois.✦✦✦

Monsieur Roméo Mondello, Eng. P., est actuellement le directeur du Service des permis et inspections de la Cité de Montréal. Il est diplômé en Sciences appliquées et Génie civil (1930); Sciences sociales, économiques et politiques (1934); Journalisme (1935); B.A. et licence en philosophie (1943); Maître ès sciences en Génie sanitaire, Harvard (1948); Bachelier en droit (1951). Il fut admis au Barreau de Montréal en 1596. L'année suivante, après sa nomination comme membre de la Société Royale d'Hygiène en Angleterre, il fut délégué en Tunisie par l'ONU en qualité d'expert de l'Organisation Mondiale de la Santé.



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FRONT COVER: *Winter Landscape/Paysage d'hiver by Cornelius Krieghoff 1815-1872. Courtesy of The National Gallery of Canada, Ottawa.*

INSIDE COVER: *This picture took First Prize for black and white photography in a country-wide competition sponsored by the Camera Club of Central Mortgage and Housing Corporation. It was taken by Mr. Stan. Edwards, Inspection Department, Victoria Branch Office, CMHC.*

A BETTER PLACE TO LIVE

A book published by the Department of Municipal Affairs of the Province of Ontario is a result of three years of intensive study of housing conditions in various Canadian cities and describes the controls and administrative methods aimed at the prevention of slums. The report officially requested by the Community Planning Association was a Federal-Provincial undertaking jointly sponsored by Central Mortgage and Housing Corporation and the Province of Ontario. An estimation based on the special urban renewal studies conducted by individual cities across Canada amounts to possible redevelopment costs of more than $700,000,000. "A Better Place to Live" examines ways and means of preventing the decline of residential areas to a point where drastic and expensive clearance projects are required. It constitutes one of the first major steps in a long-term program of helping municipalities to improve and maintain present and future residential areas and to prevent further residential blight.

The book contains four distinct sections: Housing Conditions in Canada, Efforts to Overcome Residential Blight, Community Conservation and Legal Aspects. Contained in the legal section is a draft of a model by-law to provide standards for the occupancy and maintenance of residential property. The by-law can be used as a guide for municipal officials engaged in preparing similar legislation.

Provincial and municipal planning officials in conjunction with housing authorities from coast to coast are to be commended for their enthusiasm and effort in producing "A Better Place to Live".

✦ ✦ ✦

NORTHERN SETTLEMENTS AND THE SQUATTER PROBLEM

by J. R. Lotz

Canada's frontier has pushed northward in the past few years and the new names on the map—Schefferville, Manitouwadge, Thompson, Uranium City, Cassiar, Inuvik—show that the movement has generally been in a series of leaps to rich mineral areas, rather than the onrolling tide of the sort that characterized the opening of the American West.

The existence of squatters in frontier towns has usually been accepted as an essential—if inconvenient—phase of the opening of new lands. The connotation "squatter" in this sense is used to describe any person who has no legal title to the land on which he is settled or to any person renting a dwelling from an owner who has no legal title to land on which the dwelling stands.

This article will deal mainly with the squatter problem as it exists in Whitehorse, the Capital of the Yukon Territory. It will outline some of the findings—to relate them to the stereotype of the squatter—and to make a few remarks on this manner of living in other northern communities.

The 1961 census shows the population of the Yukon to be approximately 14,000 with more than half this number living in and around Whitehorse. The city, located at Mile 918 of the Alaska Highway, is nearly as well supplied with the amenities as its southern counterparts. It has a radio and TV station, a sewer and water system (which does not extend to the squatter areas), two newspapers and, like other northern communities, a highly organized social life of more than 60 clubs and organizations.

Lower Whitehorse lies on a river flat limited by sheer bluffs. It is around the margins of this river flat on land considered wet or dangerous (some portions lie under the unstable bluffs) that the squatters have settled. In old established urban centres, the tendency is for the lowest income group to live and to develop slums in the core of the downtown section. In northern settlements, those at the bottom of the wage scale tend to get pushed to the periphery of the community, to be, in effect, banished from the central areas. They, then, live in swampy or rocky sections that could not normally be subdivided.

The names designating the squatter areas in Whitehorse—Whiskey Flats, Moccasin Flats, Sleepy Hollow—are an indication of the esteem in which the inhabitants are held by the townspeople. The impression gained from the townsite residents was that very few people knew who the squatters were or how they lived. It was obvious that the term squatter had emotional implications and expressions of opinion encountered ranged from condemnation to deep concern, with most of the emphasis on condemnation. The squatters were "avoiding their responsibilities" or "guys shacked up with Indian women" or "all driving around in big cars" or "welfare cases". The representative picture of the squatter as an aimless, shiftless, somewhat immoral individual, came up again and again in casual conversation with the permanent residents.

Physically the squatter settlements are distinct neighbourhoods. One—the Wye area—is separated from the main townsite by a large unoccupied section and can best be described as a satellite village. There are four large and a like number of small, tightly-knit, highly individualistic squatter communities. So tightly knit, in fact, that when eviction was threatened to the dwellers on Whiskey Flats, all but one contributed to a fund to hire a lawyer. On the same Whiskey Flats, the residents recruited their own labor to repair the roads and in another area, the inhabitants looked after and fed an old-age pensioner living in a trailer.

In the course of the survey of Lower Whitehorse, 287 households were labelled as squatters. The largest concentration—305 out of a total of 864 individuals—lives on Whiskey Flats. This is the oldest of the squatter areas and parts of it can be described as the worst sort of a slum. Like the others, it shows a complete absence of planning with

Right, Moccasin Flats on the unstable banks of the Yukon.

shelter built wherever the owner has the inclination. In some places, the dwellings are crowded together, in others, widespread, but all surrounded with the inevitable collection of garbage, old cars and trucks.

Of the 864 individuals noted in the house-to-house survey, there were 491 adults and 373 children, with half of these below school age. The 106 married couples had an average of 3.5 children each which shattered at least one myth that "all squatters have large families". There were only three couples with more than seven children.

Of the non-family households, 128 were single men, not including those living in common-law or casual relationship with women. These single men were concentrated mainly in Whiskey and Moccasin Flats. Eighteen households included old-age pensioners with 14 of these consisting of single pensioners living alone.

The pattern of residency revealed some interesting details on the tenure of squatting. Of the 250 heads of households willing to give information on this subject, 192 had been squatting for more than one year with 70 for more than five years.

The high proportion of home owners gives further indication of the stability of the squatter population. No less than 69.3 per cent of them owned their own dwellings with the houses running the gamut from well-built and well-equipped to tar-paper shacks. One individual had, at one time, converted an empty piano crate into a living place until, during an absence from home, someone stole it. A listing of squatter and townsite housing makes an interesting comparison. One hundred of 287 squatter houses could be classified as good, while 187 were unfit for human habitation. This can be compared to the townsite where, of 735 houses, 276 were classified as good, 381 as fair and 78 as poor.

In the Yukon, as in other frontier areas, people will talk about anything except their past lives. Consequently, it is not possible to give many details about their birthplaces, but generally speaking, the squatter seems to hail from every province in Canada. There were relatively few French Canadians, although one large family group made up of 21 individuals was living in three adjacent houses. An American Negro family and a single Chinese man were interviewed during the survey, an indication of the astonishing variety of people found to be living as squatters. The ethnic background of all but 36 of 287 heads of households was ascertained by various means. Sixty-one per cent of the total were native Canadians while 11.8 per cent were Indians or Métis and no less than 14.6 per cent were foreign born. The latter included families and individuals from Poland, Hungary, Portugal, Germany, Czechoslovakia, Italy and England. In one part of Sleepy Hollow a veritable New Canadian "colony" was thriving.

It is when the income levels and the occupations of the squatter population are examined that the most significant differences between those living in the townsite and those living as squatters are noticeable. Most of the people living in the town proper have permanent employment either with the Department of National Defence, (Whitehorse is the headquarters of the Northwest Highway System which operates the Alaska Highway), with the White Pass and Yukon Route, (the main transportation company in the Yukon) or with two large construction firms. These employing agencies indicate the economic base of Whitehorse; a military establishment, a transportation centre and a base for firms

engaged in the construction of the many hostels, schools, roads and bridges that have been built as part of the scheme for northern development.

Because of the seasonal nature of construction in the north—and this survey was taken just prior to the onset of winter—the level of unemployment was high among the squatters with no less than 28.2 per cent of the households without any steady source of income. Fourteen of the 34 Indian households were dependent on the odd-job form of employment while two received all their necessities from relief payments.

Among the 157 squatter households whose principal wage earner would reveal his place of employment, 46 were employed by the Department of National Defence, 12 by other Federal Departments and the Territorial Government and 11 by the White Pass and Yukon Route. Twenty-nine worked in industries, 15 in construction and 12 in stores and hotels, while 17 were self-employed.

There was an economic elite, whose income ranged up to $1,200 a month and this group included a chiropractor, a tourist agency owner, a freight company manager and a garage manager. But most of the squatters had incomes of less than $5,000 a year and were employed in unskilled, semi-skilled and, very occasionally, skilled jobs. Among these were laborers, firemen, plumbers, night clerks and taxi drivers. Eight of the 24 squatters with high incomes lived in the satellite "village" of Wye.

The marginal nature of the Yukon's economy is a basic insecurity shared by the residents and squatters alike but the squatters have an added concern over the tenure of land on which their homes are located, with eviction a constant threat. The high degree of physical mobility in Whitehorse —one vehicle to every two persons—is a good indication of the degree to which people there feel they have to be ready to move away from the city and out of the Territory at any time. Among the squatter population, no less than 51.3 per cent owned vehicles of some sort, but, again, an indication of the differences between squatter areas showed up in the pattern of vehicle ownership. In Wye, 19 out of 27 households had cars while in Whiskey Flats, only 32 out of 100 were vehicle owners.

As far as social mobility goes, there appear to be no bars to any squatter moving into the townsite if he acquires sufficient capital to buy a lot and build a house. Several individuals interviewed were doing so at the time of the survey. Some squatters have relocated from the older areas of Whiskey and Moccasin Flats to the newer areas like Sleepy Hollow and have built good homes.

Opposite, Lower Whitehorse from the east bank of the Yukon. Whiskey Flats is located on either side of the bridge in the foreground.

Right, well constructed houses in the satellite village of "Wye".

A hodge-podge of houses on Moccasin Flats. In the background, old stern-wheelers that once plied the Yukon.

In 1951, squatters accounted for about one-third the population of Lower Whitehorse and the percentage is probably the same for the 4,833 people listed in the 1961 census, although when the survey was taken they were numerically down because of the season of the year.

The reason why the squatters form a significant percentage of the population can be ascribed to the history of the city and to the present economy of the Territory. During the Second World War, Whitehorse became a boom town because of the Japanese threat to Alaska. About 40,000 allied servicemen and civilians moved into the area. There was no time for orderly development and houses, installations, shacks and cabins encompassed the original settlement. At the end of the war, the population of the Whitehorse area dropped to 3,680. It was a shack town and had inadequate sewer and water services, poor roads and crowded schools. The future of the settlement, and of the Yukon, remained uncertain. But slowly mining prospects, the tourist trade and the need to keep the Alaska Highway in good condition, brought development in the southern Yukon. In 1950, the town was incor-

porated as a municipality and new subdivisions along the Alaska Highway began to develop. Shacks and substandard houses were removed from the townsite and from time to time, drives were made to evict squatters who cluttered up the town lots and road allowances with small, unsanitary, highly unsightly, inflammable cabins and shacks. At the time of the survey, there was only one in the townsite, the remainder were pushed to the margins.

The squatter situation is deplored by the rate-paying residents of Whitehorse who feel the taxpayers are subsidizing the group. But the squatters make up such a large proportion of the city's population and they do pay a great deal of money —probably more than a million dollars a year— for food, goods, services and fuel. If they are considered to be a social liability, they can be viewed too as an economic asset for their purchasing power.

The economics of existence in a frontier area have ensured the continuation of squatting. The lure of the north and of one of Canada's last frontiers—for adventure, employment, escape or all three—is still strong. A good gravel highway leads from Alberta to Whitehorse and each spring men, sometimes accompanied by their families, descend upon the city. Rental accommodation in the townsite is comparatively expensive and lots, even in the subdivisions, cost several hundred dollars. No footloose individual, with or without a family, knows whether he will stay in this area of seasonal employment. Consequently, many head for the parts of town where a cabin or a shack can be rented for very little. At the end of the construction season, some return south while others remain, buying or building a cabin.

It is estimated that a family can save as much as $800 a year, and probably more, by squatting, rather than by living in the townsite. Some seasonal workers obtain permanent jobs, and establish themselves firmly in the squatter areas, extend and improve their houses, join various clubs and service organizations and, except that they do not own their land, live in an identical manner to that of any person residing in the townsite. Others maintain the pattern of seasonal employment returning south in the winter and each spring the cycle is repeated as men move into the Yukon in search of work.

The squatter population, then, represents a group of people trying to establish themselves or simply to live from season to season in a high cost, economically marginal region. The squatter areas are like a net that catches all who come into the Whitehorse area with little or no money and few skills. Some stay in the net because they have invested money in their houses, while others stay because the squatter areas are refuges where they can live as they please with less interference and less supervision than in the townsite. No building standards apply in the squatter areas and the neatness of the townsite contrasts strongly with the huddle of shacks, cabins and good houses there. The squatters and their families get the same services —fire protection, police, schools, use of the city's facilities—as do the residents of the townsite. At some periods of the year, two-thirds of the population of Lower Whitehorse is paying the municipal taxes for the remainder.

There is no doubt the squatter areas are aesthetically unpleasant and there is no doubt they do not carry their share of municipal responsibility, but the most serious aspect of the Whitehorse squatter situation is the existence of a number of problem and multi-problem families. Cruelty to children, illegitimacy, heavy drinking, disease, indigence, common-law relationship, temporary liaisons, petty crime, gambling and bootlegging were all noted among the squatters. A social worker estimated than 80% of the welfare cases in Whitehorse were among the squatters, because the squatter areas do provide a place of refuge for the aged, the unemployed, the unemployable, the rejected, the chronically ill, Indians of white or Indian status and any others who cannot, for one reason or another, fit into the pattern of society established in the city. The Whitehorse survey pinpoints the problem of the low income groups, the ill-adapted, the unskilled and the seasonally employed who move into the frontier areas of Canada.

In Uranium City, Saskatchewan, whose history is remarkably similar to that of Whitehorse, the Indian people have been pushed to the fringe of the settlements, to live in shacks and cabins and Uranium City was a planned community from the beginning. In Fort Smith, N.W.T. squatters move their cabins, set on skids, from lot to lot in the townsite. In Inuvik, a large group of squatters inhabit a marshy area near the river; many are single people for whom there is no alternative accommodation.

One community has endeavored to solve the squatter problem. In the new mining town of Thompson, Manitoba, squatting has been forbidden and no shacks or substandard buildings mar the appearance of this settlement. Any individuals moving to this single-enterprise community must work for the mining company or be paid and housed by the owners of the supermarket, the service industries and the retail stores. If a man has no job and little income, he cannot build a shack and live the sort of day-to-day existence that characterizes so many of the single men among the Whitehorse squatters. If he intends to stay and to raise a family, he must rent or buy a house in the townsite, thus making a definite financial commitment. If he is single and footloose, he can live in the camp as long as he works for the company, but once he loses or quits his job, he has no place to stay and must leave town. While the planners and administrators of Thompson have eliminated squatters, they have not been able, as yet, to solve the problem of housing the lower income groups. The housing in Thompson — at its worst — compares favorably with any suburban subdivision in Toronto or Ottawa. But for those who cannot afford or do not desire this standard there is no place to live.

In northern communities we are increasingly making southern Canadian standards of living, housing and comfort, the norm to which all must conform. And yet these high cost marginal areas require, and attract, large numbers of unskilled and semi-skilled workers who cannot or will not conform to these standards. The results, as exemplified by the Whitehorse situation, are physically and socially untidy. The squatter areas may be cleaned up in Whitehorse, but the essential problem here and elsewhere in the north of Canada will remain.

Many of the new towns are in areas whose previous economic base of hunting, trapping and fishing now furnishes a meagre return to those native peoples who still carry on with their traditional way of life. There is the belief that the new towns will offer such groups chances to steady wage-employment. The Whitehorse situation would seem to suggest that, unless these native people are trained to take over skilled jobs and professional positions, they will merely exchange a rural slum for an urban one. If they move to the towns and become unskilled, semi-skilled or casual laborers, they may cease to be members of a distinct cultural group and become part of the urban lower-class population, trapped in the sort of situation in which many of the people of Indian ancestry find themselves in Whitehorse. With the difference that, instead of passing through a squatter stage and moving up through the class system, they may remain for generations in a slum environment among the transient, unskilled southern Canadians who make up such a large proportion of the Whitehorse squatter population.

The Whitehorse squatter problem emphasizes the need for social as well as physical planning in the creation of new towns in the Canadian North. By a detailed examination of such groups, we can learn a great deal that will be helpful, not only in opening up the frontier lands, but in throwing new light on modern problems of town planning. ✦✦✦

Mr. Lotz is a graduate of Manchester and McGill Universities. He served on several Arctic expeditions before joining the Department of Northern Affairs. At present he is a Northern Research Officer in the Northern Co-ordination and Research Centre of that Department, and specializes in the study of northern settlement. Mr. Lotz's great knowledge of the region was of invaluable assistance to Central Mortgage and Housing Corporation in the preparation of the Metropolitan Plan for Whitehorse.

L'INSTITUT D'URBANISME DE L'UNIVERSITÉ DE MONTRÉAL

par Benoît-J. Bégin

L'aménagement rationnel du milieu urbain a fait l'objet de préoccupations humaines depuis l'origine des civilisations. Toutefois, ce n'est que depuis le début du vingtième siècle, avec l'avènement des villes industrielles congestionnées et désordonnées, que l'Urbanisme est devenu une discipline et une profession distinctes.

Sur le continent Nord-Américain, la profession s'organise d'abord aux Etats-Unis en 1917 tandis que l'enseignement de la discipline est dispensé à l'Université de Harvard, Cambridge, Mass. à partir de 1909. Aujourd'hui, avec la poussée extraordinaire de l'Urbanisme, au delà d'une vingtaine d'institutions décernent dans ce pays un grade universitaire en Urbanisme ou en aménagement du territoire, tandis qu'un nombre à peu près égal donnent des cours en Urbanisme.

Au Canada, les urbanistes constituent les cadres de leur profession en vertu d'une charte fédérale conférée en 1923, en créant l'Association Canadienne d'Urbanisme. Depuis, presque toutes les provinces du pays comptent des associations professionnelles dont le but est de promouvoir une plus grande compétence parmi les membres, et d'aider à la diffusion et l'application des principes de la discipline. Aujourd'hui, cinq institutions universitaires donnent au Canada un enseignement de l'Urbanisme au niveau des études supérieures, tandis qu'une dizaine d'autres comptent des cours assez poussés dans la même discipline.

L'histoire enseigne que les concepts de l'Urbanisme ont évolué avec le temps, et qu'ils ont été à l'image des cultures et des civilisations. Mais presque toujours étaient-ils considérés comme un prolongement logique de l'architecture ou du génie militaire. De nos jours cependant, sous l'influence de l'élargissement des connaissances humaines, apporté par l'approfondissement des disciplines traditionnelles et la naissance de nouvelles, comme la sociologie, l'économie, les sciences administratives et autres, l'Urbanisme étend son univers de relations. Semblable aux autres domaines de la connaissance, l'Urbanisme s'inspire des notions de l'une et de l'autre dans la poursuite de son objectif premier qui est l'ordre et la beauté de la cité des hommes.

CHAMPS D'ACTION DE L'URBANISME:

Dans ce contexte évolutif du monde de la science et des arts, il est peut-être utile de se questionner sur les champs d'application de l'Urbanisme pour mieux saisir la portée du programme académique offert à l'Institut.

L'Urbanisme a pour objet la planification rationnelle de l'utilisation du sol, de l'emprise urbaine, métropolitaine ou régionale. Son but est de déterminer la nature et les endroits des différentes formes d'activité devant s'exercer sur le territoire. C'est le moyen propre à cette discipline de contribuer à l'atteinte d'un objectif commun à plusieurs formes d'activité, soit un meilleur milieu urbain.

Comme une telle activité s'exerce dans un milieu dynamique aux prises avec les influences prévisibles et imprévisibles des facteurs sociaux, économiques et techniques, la fonction de l'Urbanisme doit être dynamique et flexible, et doit s'exprimer par des moyens appropriés, soit ceux des politiques évolutives.

Ainsi, l'Urbanisme trouve sa pleine application ou sa pleine mesure lorsqu'il est mis en oeuvre par l'intermédiaire de trois opérations interdépendantes et essentielles que l'on peut définir par l'application des trois politiques: la politique d'ensemble, la politique administrative, et la politique de mise en valeur.

La première opération est celle qui consiste à préparer méthodiquement, en fonction des facteurs sociaux, économiques, techniques et d'intérêt public, des recommandations devant servir à l'élaboration des politiques d'ensemble ou particulières, à court ou à long terme, d'utilisation du sol d'un territoire administratif ou de l'une de ses parties importantes.

Ces politiques d'ensemble ou particulières ont pour but de définir les objectifs de l'autorité publique, ou de l'intérêt privé, sur des questions se rapportant à l'utilisation du sol, tel un plan directeur d'Urbanisme, une politique d'aménagement du territoire, de rénovation ou de réaménagement urbain, ou une politique de mise en valeur des zones résidentielles, industrielles ou autres.

La deuxième opération concerne ni plus ni moins l'outillage nécessaire à l'action, puisque l'Urbanisme s'applique par l'intermédiaire de structures administratives publiques ou privées. Elle consiste dans la préparation méthodique, conformément aux facteurs légaux, politiques, financiers et techniques inhérents, de recommandations visant à l'établissement d'une politique administrative, nécessaire à la mise en oeuvre des politiques d'ensemble ou particulières.

Ces politiques conduisent à l'intérieur d'une structure administrative, à définir des sous-structures (commission d'Urbanisme, service de coordination de l'aménagement, service d'Urbanisme, etc.) des pouvoirs, des procédures, des responsabilités, et des moyens financiers nécessaires à la mise en oeuvre des politiques.

Quant à la dernière opération, qui est la plus connue, elle s'intéresse à la préparation méthodique, conformément aux impératifs techniques, financiers, économiques, légaux et sociaux inhérents, de recommandations relatives à la politique de mise en oeuvre des politiques d'ensemble ou particulières.

C'est au niveau de cette fonction que, par exemple, seront préparées des directives générales ou particulières nécessaires à la coordination des diverses politiques publiques ou privées affectant l'utilisation du sol, que seront rédigées les spécifications nécessaires à la préparation des programmes à court et à long terme d'immobilisation de capital, que seront établies les spécifications relatives aux mesures légales affectant directement ou indirectement les politiques de mise en valeur, telles les mesures propres à la réglementation des lotissements, de l'utilisation du sol par le zonage, de la qualité hygiénique et structurale des bâtiments, l'officialisation d'un plan d'Urbanisme, etc.

C'est encore au niveau de cette opération que l'urbaniste ou l'entrepreneur en aménagement sera appelé à décrire les critères devant servir à l'élaboration et l'application des politiques d'utilisation du sol, tels les critères relationnels, locationnels de compatibilité, de performance et d'aménagement.

Le rôle de l'Urbanisme est donc de premier plan. Il précède toute action ayant pour effet de transformer l'utilisation du sol d'une cité ou d'une région, dans une de leurs parties, ou dans leur totalité. De par sa fonction prévisionnelle et coordonatrice, l'Urbanisme est une activité de planification se rapportant à un secteur important du champ d'obligation et d'action de l'autorité publique. S'il est admis que l'une des principales tâches de l'autorité publique est de définir les objectifs de son action et de planifier les moyens de réalisation, la définition des politiques d'Urbanisme, assiette des activités collectives, est une des multiples fonctions de planification qui incombent à cette même autorité.

Les relations étroites qui existent avec les autres champs d'action et de planification font que la fonction de l'Urbanisme ne peut être exercée isolément, elle est une partie composante ou intégrante de la fonction plus vaste de la planification des politiques globales de l'autorité constituée, soit celles indiquées par les dimensions mêmes de son champ d'action.

Sur le plan académique, l'Urbanisme, fille aînée de l'architecture et de la médecine préventive,

Vue de l'Université de Montréal, située sur le flanc nord du Mont Royal.

élargit avec le temps son champ de préoccupations scientifiques et techniques. Aujourd'hui, comme la plupart des autres disciplines, l'Urbanisme évolue dans le monde cosmique de la connaissance. Sans la limitation des barrières artificielles imposées par la pratique restrictive de certaines disciplines, l'Urbanisme fait appel à toutes les contributions utiles apportées dans un champ ou l'autre de la connaissance humaine (écologie, sociologie, statistique, sciences appliquées, psychologie, mathématiques, économie, droit, hygiène publique, etc.) et s'en inspire.

L'étude méthodique et expérimentale du phénomène urbain et des solutions aux problèmes qu'il pose, fait que l'Urbanisme se range parmi les disciplines académiques les plus exigeantes. Le programme pédagogique de l'Institut s'efforce de mettre en relief ces impératifs premiers de toute formation universitaire.

RÉSUMÉ SUR L'OPTIQUE DE L'ENSEIGNEMENT

Sur le plan de la pensée, l'Urbanisme est une discipline de planification impliquant de par sa nature une action de prévision et de coordination en vue d'atteindre un objectif. Sur le plan théorique et pratique, l'objectif de l'Urbanisme se réalise par l'intermédiaire de trois opérations essentielles, celles de la planification des trois politiques constituantes: (d'ensemble, administrative et de mise en oeuvre). Ces trois opérations de planification sont de par leur nature des stades successifs d'un processus logique et continu poursuivi en vue de contribuer par l'intermédiaire de la planification rationnelle du sol (moyen d'action propre à l'Urbanisme), à l'atteinte d'un objectif commun à plusieurs activités professionnelles, soit un meilleur milieu urbain.

OPTIQUE DE L'ENSEIGNEMENT

A l'Institut d'Urbanisme, notre intérêt porte, il va sans dire, sur les résultats obtenus par l'application des principes de la discipline, parce qu'il est nécessaire de les connaître comme éléments de référence ou de travail. Cependant, ce qui constitue l'objet premier de nos préoccupations est: la dialectique à travers toutes ses phases, et la méthodologie scientifique (inductive et spéculative) d'étude de ses phénomènes.

Les premier et deuxième semestres de la première année académique donnent aux étudiants l'opportunité de se familiariser avec les démarches de l'esprit nécessaires à la poursuite des fonctions inhérentes à la première opération de l'Urbanisme, soit celle de la définition des politiques d'ensemble (principes et théories, standards, techniques de recherches, etc.).

Le premier semestre de la deuxième année

suite à page 12

PROGRAMME ACADÉMIQUE

1. Cours donnés par les professeurs de l'Institut:

1ère année—(1er semestre)

501	Principes et Théories de l'Urbanisme I	45 heures	3 crédits
502	Histoire de l'Urbanisme I	15 heures	1 crédit
503	Normes, standards et critères en Urbanisme (Techniques)	30 heures	2 crédits
511	Travaux pratiques (Techniques)	45 heures	3 crédits
512	Travaux pratiques (Recherches) I	45 heures	3 crédits
513	Travaux pratiques (Aménagement) I	45 heures	3 crédits

1ère année (2e semestre)

551	Principes et Théories de l'Urbanisme II	45 heures	3 crédits
552	Histoire de l'Urbanisme II	15 heures	1 crédit
553	Normes, standards et critères en Urbanisme II	30 heures	2 crédits
561	Travaux pratiques (Techniques urb.) II	45 heures	3 crédits
562	Travaux pratiques (Recherches et aménagement) II	90 heures	6 crédits

2e année—(1er semestre)

601	Législation relative à l'Urbanisme	30 heures	2 crédits
602	Administration de l'Urbanisme	30 heures	2 crédits
603	Financement de l'Urbanisme	30 heures	2 crédits
611	Travaux pratiques (Conservation, rénovation et réaménagement urbain)	45 heures	3 crédits
612	Travaux pratiques (Politiques administrative et de mise en valeur d'Urban.)	90 heures	6 crédits

2e année—(2e semestre)

651	Principes et Théories de l'aménagement du territoire	45 heures	3 crédits
652	Législation relative à l'aménagement du territoire	15 heures	1 crédit
653	L'économie du sol urbain et régional	30 heures	2 crédits
661	Travaux pratiques (Techniques d'enquête et de recherche en aménagement du territoire)	45 heures	3 crédits
662	Travaux pratiques (Aménagement du territoire)	90 heures	6 crédits
	Stage et thèse		8 crédits

2. Cours donnés dans d'autres facultés de l'Université

Le programme prévu plus haut sera complété par des cours pris dans d'autres Facultés et Ecoles de l'Université, et cumulant au moins 12 crédits.

entend poursuivre le processus dans ses deux dernières phases, soient celles des politiques administratives et des politiques de mise en valeur.

Ces deux phases de planification comportent, comme la première d'ailleurs, des références à un ensemble variable de connaissances ou de disciplines connexes. Pour plusieurs de ces disciplines, (sciences administratives, sciences politiques, psychologie des masses) des liaisons étroites et opérationnelles n'ont pas encore été établies avec l'Urbanisme. D'autres comme l'architecture, la finance, le droit, en dépit d'une association assez étroite et assez vieille, ne sont plus étudiées dans la même optique à cause des modifications profondes de concepts apportées récemment au champ d'action de l'Urbanisme.

La pédagogie des cours du premier semestre de la deuxième année s'inspirera de cette optique. C'est-à-dire que ceux-ci seront une sorte d'exploration dirigée systématiquement par les professeurs à travers tous les champs de la connaissance incidente, principalement aux deux dernières phases du processus. La première phase ayant des relations étroites avec les deux dernières sera par le fait même confrontée à nouveau, jugée et modifiée si nécessaire selon les nouvelles données du problème.

L'exploration dirigée suivra elle-même un plan général. Dans ses grandes lignes, le plan est constitué par les sujets des cours portés au programme, soit autant que possible ceux qui sont nécessaires à l'objet final des deux dernières phases de l'Urbanisme (cours sur le financement des politiques d'Urbanisme, cours sur la rénovation et le réaménagement urbain, etc., éléments constituant les assises du cours global de synthèse, soit celui des deux politiques).

La pédagogie de ces cours (de synthèse et des notions de base) verra à donner d'une façon didactique, par les professeurs ou les conférenciers invités, les éléments et les principes généraux relatifs à leur sujet respectif. Quant aux relations, aux incidences et aux champs d'application de ces principes et théories avec l'une ou l'autre de ces deux phases de planification, elles seront poursuivies au cours de séminaires et de discussions, séparément et d'une façon méthodique intégrée dans le cadre général du cours global de synthèse, où tous les professeurs et un certain nombre de conférenciers seront appelés à y participer.

C'est ainsi que les cloisonnements entre les différentes disciplines conservées jusqu'à maintenant pour fins de clarté et de facilités d'enseignement seront abolis et intégrés dans le cours général de synthèse, et où l'une et l'autre joueront le rôle qui leur incombe dans la formulation des politiques de planification. Le "design" d'un espace urbain vu d'abord expérimentalement dans le but d'en explorer les possibilités fonctionnelles et plastiques, assujettira comme il sera assujetti à son tour, dans un équilibre voulu, aux politiques d'ensemble, administratives et de mise en valeur. Il en sera de même des autres politiques, telles la rénovation et le réaménagement, éléments importants du clavier de leviers des politiques d'Urbanisme.

Vus dans cette optique, les cours doivent être considérés comme des dialogues évolutifs disciplinés par la dialectique propre de chacun, et ouverts sur des horizons nouveaux de liaisons et de rapports existant entre eux, et vus dans cette optique, les cours entraînent l'étudiant dans le processus constant du choix d'une option, ou dans la mécanique méthodique des décisions, principe d'action et d'efficience de la fonction de planification. ✦✦✦

HENRICHON

Monsieur Benoît-J. Bégin est le directeur de l'Institut d'Urbanisme de l'Université de Montréal. Il détient les diplômes universitaires suivants: B.Sc. en architecture-paysagiste (1947), M.Sc. en architecture-paysagiste (1949) et "Master in City and Regional Planning" (1950). Il a acquis une vaste expérience en architecture-paysagiste à l'emploi du Service d'aménagement de la Capitale et en se chargeant de plans et de travaux complémentaires dans plusieurs villes et cités de la province de Québec. Il est directeur de l'Association des urbanistes professionnels de la province de Québec, membre de l'Institut d'urbanisme du Canada et membre du Conseil canadien de l'habitation-type.

An example of
the closed space,
Flemingdon Park,Toronto.

THE VISUAL IMPACT OF COMMUNITIES

by Ronald Whiteley

Most of the planned neighborhoods that are featured prominently in the journals of planning and architecture have been very thoroughly documented from the technical point of view. We have been shown that certain methods of financing have had this or that effect on the final result. The lengthy planning processes of assembling the land, subdividing, providing the services, of streets, schools, shops and the like have been discussed from many points of view. The effects of governmental authority versus private enterprise have been outlined and investigated.

There is, however, one facet of study that has not been as meticulously explored to date. This is in the area of visual impact that is made by our communities. In other words, we do not seem quite so concerned with the consideration of how well, or badly, they look. Are they exciting and stimulating or just well planned but dull and dreary? It would seem that we believe that if our statistics are correct, if our planning is thorough and if our plumbing works, the people who live in these communities will be naturally happy, well-adjusted citizens and, if not, they are just chronic complainers. It is obvious, however, that the appearance of the neighborhood—its vividness—is an important factor in satisfying the ultimate needs of people.

It could be argued that we cannot discuss this since so much of the visual impact of the neighborhood is subjective, corresponding to the "I know what I like" or "I don't like the look of that" idea prevalent in art. Even though it is taken for granted that much of the vividness will be a personal judgment, it is still reasonable to study these factors and to diagnose the disease and propose principles upon which healthy communities may be established.

When we examine the planning diagrams of neighborhoods, regardless of how well they are delineated or presented, we must realize that we are engaged in an intellectual appraisal of a situation or a proposal. This being the case, it is obvious that

most of the information will be of the kind that answers the physical problems, that gives possible solutions to the questions arising from our statistical analysis of the expressed needs of the community. We should expect the services to be of the proper capacities and disposition to do their job adequately. The various zoning by-laws and restrictions will have been taken into consideration and the planning laid out accordingly. From the standpoint of visual impact, however, we must look at the plans with a more sensitive eye. To judge the merits of a scheme in this way will require that consideration be given to what is seen at the pedestrian level of experience and also at the vehicular level. Everyone deplores the excessive use of badly-designed billboards that deface our roadsides and certainly this was very much the case a few years ago. But the solution was not the mere removal of the offending signs, for in many cases it produced that monotonous dullness with which we are all so familiar—the shoulders and flat greensward that border most of our superways. There must be something to stimulate the senses and merely removing the offensive visual stimuli is not enough. It must be part of the planning in which the vividness of the environment is emphasized and clearly evident.

The usual reason given for the curvilinear pattern of roads and streets is that it is more suitable to the contours of the land. Perhaps a much more valid reason is that the curving of streets adds immeasurably to the visual effect of the spaces created by them.

What are the factors that give vividness to the environment? One of the important factors is undoubtedly the node and the slot. This might sound like another dogma—the laws of the Medes and the Persians—but if one reflects upon the implications of it, its importance becomes self-evident. The word vividness stems from the same root as the word for life itself and the rhythm of movement and pause is, certainly, the fundamental factor involved in life.

The nodes in our environment are those parts that make us pause in our visual inspection of the world around us while the slots are those parts of the environment that fill the gaps between the nodes, the areas where we experience a movement from one focus to another. This is a simplification and like all such simplifications, attempts to state a black and white relationship when obviously there are many grey areas. If you are confronted with row upon row of similar single-family dwellings placed at uniform distance from the curbs of streets that have the same width and paving, the dullness of these slots, without any noticeable accents anywhere, is very easily recognized. Yet in the same way, the village green with the tower of the village hall or perhaps just a bandstand being a logical focus seems well done and is remembered with pleasure. The node and slot are described in many ways. Another such description is tension and release which are the forces of something that hold your interest contrasted with those parts that allow you to wander or move about. This factor adds another dimension to the simple node and slot in that variations in width and height can be used for the effect of movement and emphasis.

A bridge across a city street is this kind of node. At the pedestrian level an average city street is a tall space. We speak of the canyons of New York. A device like Simpson's Skywalk, regardless of what we may think of it in purely architectural terms, does form a place of tension in the street where the height of the canyon walls is momentarily and dramatically changed. The rhythm of an arcade if interrupted by the canopy of an entrance, not only gives emphasis to the entrance at this point, but adds to the rhythm of the arches themselves.

One excellent example of the vividness expressed by the tension and release experienced in neighborhoods is in the spaces formed by the grouping of buildings. It might be the simple effect created by a vacant lot, giving a sense of release to the wall of house fronts along the street or a small playground well placed in the slots of the surrounding pattern. Even a "T" intersection of streets is an example since it is more noticeably a release than is a simple intersection. When one looks at a plan of a neighborhood the evidence of tension and release, node and slot, are easily recognized and it is in this way

The tower in the town centre in Stevenage, a strong symbolic form used to give identity to the community.

Below, the Don Mills Curling Rink. Whatever its architectural standards, its powerful, symbolic character cannot be denied.

that we can more clearly understand the visual impact of the development.

Another variation on the theme of the node and slot is found in the closed view and the vista. Again, if either is used exclusively, we weaken its effectiveness. When the streets run straight on a grid pattern through the community and out beyond to the open country, we are lost in the many vistas that each street forms and if even one street ends in a cul-de-sac, it has a visual value far beyond what it should have. The neighborhood that achieves the right balance of open vista and closed view is certainly the most satisfactory from a visual point of view. The combination of curving streets that close the vista even at some distance and the long views of straight streets is the kind of harmony that adds a richness to the environment.

Another of the factors that adds expressiveness to the visual impact is rhythm, the alternate beat of emphasis and repetition. A rhythm of single, repetitive measure, however emphatic, is not a lively rhythm with any vitality in it. As before, it is necessary to achieve a balance and harmony between the more repetitive beats and the emphatic ones. A vivid effect will only be achieved when this is done.

In a consideration of the materials used through-

Closed front yard space in Flemingdon Park (above) and Stevenage. The individual units, arranged about the space are visually satisfactory.

out the neighborhood, this same sense of proportion should be felt. The use of the same basic materials, colors and planning will achieve a simple unity no doubt, but it is obvious that we can achieve a dull monotony in a high key or a low key if we do not introduce some accents, some emphatic chords, to re-awaken the interest of the observers. The fine contrast made by the white wood trim to the brick background materials in Georgian housing is well known. However, it is equally true that too wide a range of materials or colors will not assure one of a lively, vital effect. If everything shouts for attention, we are confused by the clamor and make no effort to appreciate the scene. Rather, we tend to look away and try to escape from the confusion.

If there is an answer to the question of what gives vividness to our environment, it is certainly found in the full appreciation of the rhythm of life itself. It is in the polarity of things, the alternation of activity and repose, of stimulation and relaxation.

Perhaps the most important factor in the visual impact of a community is the sense of identity that the individual feels with it. This sense of identity is most readily experienced when the neighborhood has a strong visual image—that is, when the community is clearly remembered. And there are many ways to create such an image. One very facile device is the forceful symbol such as the Eiffel Tower in Paris, the St. Louis Gate in Quebec and London Bridge. Obviously, it is not going to be possible to create a new and comprehensive symbol for each neighborhood, but it is equally obvious that some attempt at such symbolism makes the image more powerful. The modest rectangular tower at Stevenage or the robust umbrella form of the curling rink in Don Mills, quite apart from their architectural merit, are the major factors in the remembered image of these communities.

Perhaps a better way to give forcefulness to the image is by the planning and care that go into the details of the scheme. Most of what makes an impression on us is of this order. We remember the sculpture at the Northland Shopping Centre in Detroit, the garages under the courtyards at Flemingdon Park in Toronto, the rustic nature of the site at the edge of the housing of Vällingby in Sweden, or the village greens in New England. In addition to the remembered images, we must attempt to give people a sense of identity in another way; they should feel a real sense of belonging — of being at home in the neighborhood. As so often happens, it might be easier to say what should not be done—to state those things that give a feeling of strangeness.

But again, there are certainly a few things that help to give the sense of belonging. The scale of the neighborhood should be in the details of a truly human dimension (this is axiomatic) and also in its total concept. Without becoming involved in a discussion of how large a community should be, we should be able to grasp, quite readily, how large it is. No sense of identity or of belonging is possible when what we wish to identify with, or belong to, is a vague sprawl, a nebulous agglomeration of houses, streets, apartments, shops, playgrounds, and the like, extending from "somewhere around here" to "who knows where". It should, as well as it can, reflect the culture, tastes and standards of the people. Susanne Langer states it should have an "image of ethnic domain".

A neighborhood that has been adequately resolved in all its aspects of financing, servicing and development will not necessarily be successful in its prime purpose of providing an environment for a group of people to live fully and happily unless the visual impact is also studied and realized. ✦✦✦

Mr. Whiteley was educated at the Universities of Manitoba and Harvard. He has instructed in architecture at the Universities of Manitoba, Kansas State and Penn State and at present is an Assistant Professor of Architectural Design at the University of Toronto. He has also engaged in private practice with both the firms of Shore and Moffat and John B. Parkin Associates. While with John B. Parkin Associates he worked with Viljo Ravell on the New City Hall for Toronto. He has been a frequent contributor of plans to the book, Small House Designs, prepared by CMHC. In 1961, he was a staff member on the World University Service summer seminar held in Uppsala, Sweden.

FRIEND OR FRAUD?

by Tony Kirby

Information Division
Central Mortgage and Housing Corporation

If the 1950's were characterized by urban expansion, the early 1960's may well become known as the years of renovation and conservation.

Reflecting this line of thought is the growing sum being spent on urban renewal and rehabilitation projects and, at the home-owner level, on repairs and improvement. From a total of $31.6 million in 1957, National Housing Act Home Improvement Loans have climbed steadily to a 1961 figure of $47.4 million. The estimated total cost of all home improvement work in Canada currently approximates $500 million a year. Yet this sum is small compared to the expenditures foreseen twenty years hence. By 1980, 1½ million of our houses will have reached an age between 25 and 50 years. Another 2⅓ million will be over 50 years old. Although home improvement is now big business, in the next decade it will become a major operation.

Such a market potential provides an ideal target for the attentions of sharp operators. That they have not been slow in recognizing its possibilities is borne out by recent statistics published by Better Business Bureaux, Incorporated. During 1960 and 1961, this international organization handled more than 4½ million complaints and enquiries. Of these, more than 520,000 were concerned with home improvement and repairs.

Although the majority of victims of home repair schemes were seeking only a good job at a reasonable price, many were hunting for bargains. To look for a saving in any purchase is quite natural, but it is wise to know as much as possible about the product desired before beginning the search. When the doorstep suddenly becomes a market place and a householder, without sufficient knowledge of the commodity being offered by a stranger is given an apparent "deal", bargain hunting can be dangerously close to gambling. Too often and too late, the customer realizes that he or she, has been made a participant of a game in which "the dice were loaded".

On the Prairies and the West Coast, a hoary old routine recently underwent rejuvenation. The "we've selected-your-home-as-an-aid-in-our-sales-campaign" line was successfully fed to numerous home owners who were willing to believe the smooth words of "salesmen" who offered "real deals" in exchange for nothing but a signature.

To have his house renovated and realize some additional money at the same time, the victim was asked only to place a small sign on his front lawn. This would advertise the merits of the new labor and money-saving siding which was going to make his house one of the most attractive on the block.

After the first few pieces of siding had been placed, a "delay" occurred. When several weeks passed without completion of the job, the householder began enquiring. Too late, he found the firm had disappeared. After the work was started, the customer could not revoke as the firm had clinched the contract—a process known as "spiking". In the interim, the company had declared "bankruptcy" and had sold the promissory note which the victim had signed, to a finance company. The siding firm, now operating in fresh territory, under a new name, could not be held responsible for liabilities incurred earlier and the finance company was legally entitled to full payment of the sum specified in the note. Usually the figure was four to five times the true value of the work—had it ever been completed.

Education can be costly. Each of the saddened victims would now gladly echo the slogan of Better Business Bureaux, Incorporated: "Before you invest —*investigate*!"

Many people fail to realize that their signature alone is potentially worth a great deal of money. Too

often forgotten is the fact that if a paper is important enough to need a signature, it's important enough to *read thoroughly*!

Elderly women, especially widows and others who live alone, are choice prey for these operators. After careful observation to identify such homes, with swift and almost silent dexterity, a ladder is placed against the house—usually without the owner's permission—and by levering and pulling, bricks on the chimney are loosened and removed. The surprised and easily frightened occupant is then confronted with the "evidence" of an "extremely dangerous" situation which the operator claims to have noticed "while working nearby". Prompt repairs are recommended, usually at an exhorbitant price, and the unsuspecting victim agrees to the offer.

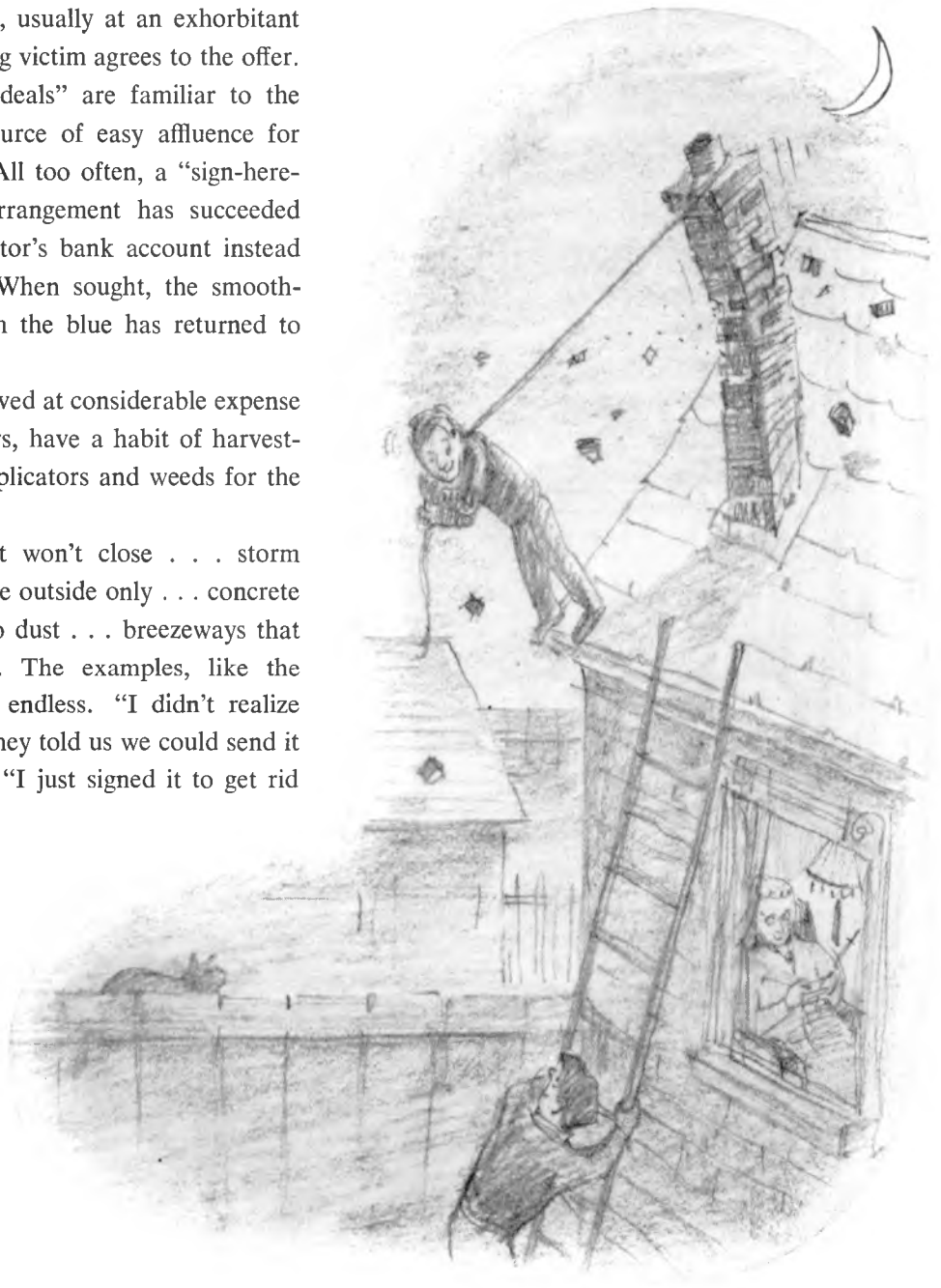
Some landscaping "deals" are familiar to the authorities as another source of easy affluence for the criminally inclined. All too often, a "sign-here-and-pay-50%-deposit" arrangement has succeeded in grooming the perpetrator's bank account instead of the victim's garden. When sought, the smooth-sayer who appeared from the blue has returned to the same place.

Driveways, newly paved at considerable expense by fly-by-night contractors, have a habit of harvesting dollar bills for the applicators and weeds for the owners.

Storm windows that won't close . . . storm doors that open—from the outside only . . . concrete walkways that crumble to dust . . . breezeways that drain *toward* the house. The examples, like the lamentations, are almost endless. "I didn't realize it was a contract. . . ." "They told us we could send it back if dissatisfied. . . ." "I just signed it to get rid of him. . . ." "It seemed like such a good offer. . . ."

Experienced investigators of this sort of sharp practice agree that it will never be stamped out completely. As fast as one scheme is killed, another is born. A public, educated and informed, vigilant and alert, is the best combat force possible.

The truth of this belief was underlined recently when a rapid stop was put to a novel scheme in Toronto. In this case, stolen gas company uniforms were used by impostors who confronted home owners with the story that gas leaks had been discovered in the vicinity and that, for a small fee, a check could be made of the gas supply lines in the house. A



small quantity of methyl hydrate, surreptitiously applied to a pipe joint, readily ignited when approached by a lighted match and a suitable impression was thus easily made on the owner.

Suspicious recipients of these demonstrations called the authorities and, through press, radio and television, details were immediately circulated, squelching a sharp practice which might otherwise have succeeded.

After making the decision to renovate or extend the home, how can the owner be sure of selecting one of the honest and thoroughly experienced firms that represent the majority? Trade directory-type advertising cannot always be relied upon as a guarantee of satisfaction. Like rain, advertising space is available to "the just and the unjust".

The Chamber of Commerce is a good source of information concerning local business firms and, as such, is doing a fine job. Like the Better Business Bureaux, however, the Chamber must accumulate evidence of shady practice before it can warn enquirers. In other words someone must be burnt before others can be warned. Neither of these organizations can act as an agent for customer or company.

A usually reliable source of guidance is the friend or neighbor who has recently had such work done. Sometimes though, advice like this is hard to obtain and it is here that a reliable home-owner's association can be of real help. Such an organization was founded in Toronto in 1959. Its principal aim is the provision of protection and service for the home owner. In addition to assuring 24-hour availability of all household service facilities, this association seeks to combine the usually divergent aims of quality work with lowest possible prices. By means of individual agreements with each of its carefully selected contractors, the organization secures for its members a guarantee of complete satisfaction with every job done.

But even a legitimate home-owner's association can provide material for chicanery artists to twist. Not long ago, a victim of a renovation "deal" was approached by a bogus representative of the association who sought to relieve her of $2,000 as consideration for "legal" proceedings to reclaim the money she had spent on the work.

Unfortunately, as the volume of home repair work grows, so does the need for caution.

Yet here are pointers for the inexperienced which, if followed, will do much to ensure a good job at a fair price:

* Know your contractor. If you must deal with strangers, check their background before signing or paying anything.
* Check the prices and the claims. Beware of fabulous guarantees—they're usually worthless. Ensure that what is said is also written —clearly and understandably!
* Always read and *thoroughly understand* your contract.
* *Never* sign blank forms or contracts.
* Never allow yourself to be high-pressured into a rapid decision. A reputable salesman will understand your wish to consider the offer before committing yourself. He'll also accept "No, thank you" courteously.

When proffered a fabulous deal it may be helpful to remember a little saying that originated in Italy. Never a cynic but truly a humanist, the author observed: "Nemmeno un cane scodinzola per niente!" —"Not even a dog wags his tail for nothing!" ✦✦✦

THE HISTORY OF THE NHBA

by C. Gordon Ryan

When members of the National House Builders Association gather at Halifax for their annual convention in January, they will be celebrating the 20th anniversary of their founding meeting.

The remarkable progress of NHBA during that brief span of years parallels the mushroom growth of the residential construction industry. The organization has expanded from a small dedicated group of builders, when it received its charter from Secretary of State Norman McLarty on February 8, 1943, to a national body respected as the official voice of house building in Canada.

Today, the Association, under the leadership of President William M. McCance, P.Eng., of Sarnia, has more than 3,000 active members representing 48 local affiliates in principal cities coast-to-coast. Truly representative of its industry, its membership embraces house builders, building contractors, subcontractors, material suppliers, building material manufacturers, mortgage lenders, realtors and architects. It is this wide representation within the Association's ranks which permits it to speak with authority on the complex housing scene.

NHBA's close liaison with Central Mortgage and Housing Corporation on projects such as the Association's research program is indicative of the co-operative attitude of the house builders' group in furthering progressive government policies in the housing field. Concerted efforts by both the Goverment and the Association has done much to improve conditions within the industry during the past 20 years. In fact, it was the interest of Government officials back in 1943 which encouraged the house builders to form their organization.

At the time, Canada was struggling to meet war commitments and the booming arms industry was increasing demand for shelter in many areas throughout the country. Opportunities within the construction industry were attracting numerous small, inexperienced contractors, who were inclined to cut corners to save a dollar. The situation was disturbing to the Government and to the reputable builders. It became imperative to find a solution.

A home builders' association had been organized in Toronto in 1921 and was effective within its own area of operation. It appeared logical that, if similar organizations were formed across Canada, the housing contractors might be in a position to police their own industry and eradicate "jerry-builders" who were undermining confidence in the house builder.

Frank W. Nicolls, Administrator of the National Housing Act at the time, helped to organize meetings and bring together builders from across the country. His contribution to the Association was later recognized when he was honored with an NHBA honorary life membership.

A series of such organizational meetings held in Toronto and Ottawa were attended by well-known builders of the day including Frank Lount, of Winnipeg; Harry J. Long and George Garton, of Toronto; K. J. Greene, Frank Shouldice and C. A. Johannsen, of Ottawa; Lyle Hallman and Bill Robb, of Kitchener and J. L. E. Price, of Montreal, who was to become the first NHBA president. During these initial discussions, K. J. Greene, of Ottawa, was "drafted" by common agreement as president pro-tem.

As a result of this activity, the initial group along with Harry McRobb of Toronto; Charles Jutten and Alexander Sharp of Hamilton; Joseph Gosselin, Joseph Guay and Andrew Aisenstadt of Montreal; Edgar Moir of St. Catharines; Harry Sifton of London and Robert Lecky of Vancouver, applied for the Association's charter in 1943.

Purpose and objectives of the NHBA as set out in the charter were:

William M. McCance of Sarnia
President of National House Builders Association.

1. To associate the home builders of Canada for purposes of mutual advantage and co-operation;
2. To improve the quality and character of homes for the Canadian people;
3. To develop and establish standards of practice for those engaged in home building;
4. To exchange experiences and information among those engaged in home building;
5. To represent its members in matters of national, provincial and local policy and legislation affecting home building.

In 1944, the first annual convention of the Association was held at the King Edward Sheraton Hotel in Toronto. J. L. E. Price of Montreal, was elected president at this meeting which also adopted the original NHBA constitution.

After the war, the fledgling group faced bleak days during the late 40's. There was much work to be done within the ranks of the housing industry, already suffering a period of critical post-war material shortages. The association was enabled to flourish during this period only through the purpose and direction of its leaders and the support they generously provided in time and money. Mr. Price served as president until 1947 when he was succeeded by Frank R. Lount of Winnipeg. George Prudham assumed the reins in 1948 and held the post for almost two years when his election to Parliament forced his retirement. John Griffin of Toronto, took over to complete Mr. Prudham's term of office.

The efforts expended by these officials began to bear fruit in 1949 when increased activities of the Association prompted a re-organization of its administrative policy. Up to that time, business administration had been under the direction of Joseph T. Crowder of Toronto, who served in a similar capacity for other associated groups. However, in 1949, at the annual meeting in Winnipeg, Grant Smedmor, who had been involved with NHBA affairs through Mr. Crowder's office, was appointed Executive Secretary of the Association.

A Central Committee, which would advise the executive secretary on matters of administration and policy, was also appointed at this meeting. Authorized to act on behalf of the board of directors, this committee was made up of builders in close proximity to Toronto and included John Griffin, Campbell C. Holmes, Sam Jackson Jr., Jim Braby, Harry Long, Ed Ratcliffe, Frank Lount, Cyril

At the NHBA Convention, held in Windsor 1956, (back row). L. A. Rice, Treasurer; Gordon S. Shipp and Harry J. Long, Past Presidents; and M. Wade, Vice-President.

Schofield and Mr. Prudham.

Conditions were also brightening in the construction industry according to the following excerpt from the minutes of the 1949 annual meeting: "The improved flow of residential building materials is resulting in ever-increased production of new houses. The increased efficiency of labor is gradually making itself felt. These factors plus improvements in design, materials and construction technique account for the fact that while residential building materials and labor increased 17% across the board in 1948, selling prices of new housing units rose only about 11%."

The association noted with pride the accomplishments of its expanded program of the previous year. Particular reference is made to the successful conference with the representatives of the Ontario Government which resulted in the Ontario Housing Development Act, 1948. The minutes also note the success of efforts to improve material supply problems, particularly nails and lumber prices.

As the Association moved into the 50's, its problems grew more numerous and varied. However, the perennial bugbear of the industry "a steady flow of mortgage funds" became the major obstacle. Revisiting his house building Associates at their 1950 annual meeting in Winnipeg, Mr. Prudham, MP for Edmonton West and Parliamentary Assistant to the Minister of Resources and Development, summed up the problems facing the industry when he told his former colleagues:

"If we accept the challenge and build houses the average man can buy, we don't have to fear socialism or government intervention. I feel we have an obligation to look after the little man."

Accepting the challenge, NHBA tackled the job under the leadership of F. A. (Phil) Mager of Winnipeg, who served two terms, to be succeeded by W. E. Grisenthwaite, Hamilton, in 1952. But already the inroads of higher land costs and heavy demand for available mortgage funds were placing the objective out of reach.

When Gordon Shipp of Toronto took office in 1953, the mortgage situation had reached a critical stage and during that year it became apparent that something must be done to solve the problem. The Association, which had been pressing for the Government to make the savings funds held by chartered banks available for mortgage lending, had

their request granted later in the year when the Government announced plans for new housing legislation which would be enacted in 1954. Commenting on the government action at the time, Mr. Shipp said builders had been unable to get sufficient forward commitments from existing lending institutions to enable them to plan their operations on the scale necessary for maximum efficiency and economy. "There is no reason," he predicted, "why 125,000 units cannot be built as a result of the proposed legislation. That's a one-third increase over the number we've been building each year since the war."

The Association's internal operations were also changing during 1953. NHBA had developed a total membership of 1,500 and comprised 13 Associations. Business administration was under the guidance of Secretary-Manager John Caulfield Smith, who had taken over this position on a contract basis a year earlier. Today Mr. Smith serves as the Executive Vice-President.

At the mid-year meeting of the management committee in July, Mr. Shipp announced that a standard form of warranty had been prepared by the National Association for members who wished to guarantee their houses offered for sale. The warranty provided that the builder would replace or repair free of charge any defects which occurred under ordinary use and care within one year after delivering a house to the purchaser. This type of warranty has since been adopted by most NHBA affiliates.

A decision by the management committee a month later resulted in the establishment of the "National Builder" as the official publication of the Association. Introduced in 1952 as a roster guide, the first issue of the enlarged magazine became available in January, 1954. This venture proved successful, in fact so successful that it became an administration problem for the Association and the publication was purchased by MacLean-Hunter in 1958. A few months ago this company also purchased Canadian Builder and merged the two magazines under that title.

While the new National Housing Act, 1954, eased mortgage problems considerably, the continually rising cost of serviced land caused concern and the question was to become even more serious when the late Harry J. Long of Toronto, succeeded Mr. Shipp as president in 1955. Mr. Long and various other members of the Association felt that particular attention should be paid to land development. To this end the Project Builders and Land Developers Institute was formed as a component part of NHBA. The purposes of the Institute were:

1. To improve the standards of housing and subdivisions;
2. To represent project builders and land developers and their interests at the national, provincial and municipal levels;
3. To endeavor to protect purchasers of new homes from unnecessary increases in cost of serviced land by urging:
   (a) municipalities to adopt a uniform, reasonable standard of engineering services;
   (b) the province to properly define the provisions of the Ontario Planning Act.
4. To publicize project building and land development as legitimate and essential functions in the Canadian economy;
5. To help finance the NHBA and thereby assist it to become stronger and more geographically representative of the housing industry.

Among the prime movers in establishing the Institute were W. M. Thompson, Harry J. Long, Gordon S. Shipp, A. W. Farlinger, L. A. Rice, Angus McLaskey and Edmund Peachey of Toronto; Mowbray Sifton, London; Clare McCullough, Oshawa and Robert Elliott, Hamilton.

By May, 1956, the Institute had 45 members located in various cities across the country. The growth of this group proved helpful to NHBA as institute membership fees were ploughed back into funds for the payment of regional organizers in the Prairies and B.C. Proof of the effectiveness of the resulting accelerated organizational campaign is demonstrated by the increase of affiliated locals from

18 to 30 in a single year.

Late in 1956, it was decided that the Institute might be more effective as a self-contained body, so a constitution was drawn up and in 1957 the group separated from NHBA and became known as the Urban Development Institute. The Institute continued to make contributions to NHBA in payment for servicing and secretarial duties for a few years.

The growth of the Association during this period also sparked a movement for a new NHBA constitution at the annual meeting held at Windsor in March, 1956. The new policy was indicative of the mature status of the Association as evidenced by the establishment of two important committees—Liaison and Research.

The Liaison group was empowered to discuss all subjects of interest between NHBA and CMHC with the exception of standards which were reserved for the attention of the Research Committee. Gordon S. Shipp was named chairman of the liaison committee which included Herbert Riehl of Vancouver, Robert Orr of Edmonton, A. N. Miller of Montreal and W. C. Risley of Halifax.

William M. McCance was named chairman of the Research Committee and he remained in that capacity until he was elected President of the Association in 1962. Sharing the chairmanship of the committee in 1960 and 1961 with Mr. McCance was C. J. McConnell of Edmonton, NHBA's first vice-president and still chairman of the group. Destined to become one of the most effective working groups within NHBA, the original committee included Herbert Riehl of Vancouver, Robert Orr of Edmonton, Bert Stovell of Winnipeg, George Hipel of Preston, Edmund Peachey of Toronto, Maurice Joubert of Montreal and W. C. Risley of Halifax.

The committee's main responsibilities at its inception were:

1. To establish liaison with CMHC and NRC on the subject of housing standards;
2. To pursue research into the testing and development of new materials and building techniques.

Over the next few months the committee was able to accomplish its first goal. As a result of the close liaison established, NHBA was able to assist the government in improving the NHA standards. When it was decided to prepare a new code, members of the Research group were called upon to serve on the various committees undertaking the project. With the introduction of Housing Standards, Canada, 1962, the Associate Committee of the National Building Code became responsible for future amendments. However, the Research Committee has retained its liaison with CMHC and NRC and continues to present the builders' views on Standards by making recommendations for amendments.

In addition, the Committee is represented by W. J. Connelly of Ottawa, on the Interpretations Panel which was set up to give emergency rulings on questions of interpretations arising from the use of the new Standards. The decisions of this group, which includes representatives from CMHC and NRC, are accepted as official until such time as the Associate Committee studies and issues a final ruling.

The Committee's research work was started in 1957. A program was introduced with the objective of producing a better product at equal or lesser cost through the development of improved construction techniques. Included in this research plan was a study of new building materials and a test of recognized materials used in new ways. Experiments were carried out in a series of projects, which for practical purposes took the form of houses. The Mark I house was constructed at Preston in 1957, Mark II at Calgary two years later and Mark III at Ottawa in July, 1961. The success of this program may be judged by the Federal Government's decision earlier this year to make a $2,800 grant to NHBA to enable the Research Committee to gather data for a possible Mark IV project in 1963.

The progressive steps taken within the internal organization of the Association were consolidated during the next three years as the housing industry set new production records.

The direct lending policy of the Government in 1957 stimulated the house building field and attracted

many opportunists who had visions of "quick money". This was a pressing problem with which NHBA Presidents Les Wade of Calgary, and Maurice Joubert of Montreal, had to contend during their tenures of office from 1957 to 1959.

When Campbell C. Holmes of Toronto, assumed the presidency in 1960, he soon found his industry once again facing a mortgage dilemma. Lending institutions cut back on their activities early in 1959 and to take up the slack the Government increased direct lending to the point where all allocated funds were exhausted by November of that year. Government funds could not be replenished till Parliament met in April of 1960. Mr. Holmes moved swiftly to form a Special Committee to examine and recommend action on the long-term future of the house building industry. Chaired by Leonard F. Long, President of Building Products Limited, the committee was composed of NHBA officers, heads of large building material manufacturing companies and professional advisers.

The Special Committee completed its work in the spring of 1961. A brief was presented to the Minister of Public Works calling for a Royal Commission to study means of ensuring ample mortgage funds for house construction in Canada.

Graham C. Lount of Winnipeg, who had succeeded Mr. Holmes, realized that the whole concept of the industry was changing. He pressed for a provincial organization and also for a secondary mortgage market to insure a continuance of mortgage money.

The Government took action during the year on the secondary mortgage market with CMHC offering some of its mortgage holdings for sale as a first step in encouraging this type of operation.

Mr. Lount's efforts also met with some success in the field of provincial legislation. Aware of the activities and accomplishments of the Alberta Council, he recommended builders in other provinces follow this example. The president's suggestion spurred activity in Ontario, where D. S. Mitchell of Peterborough, had already prepared the groundwork. In his role as Ontario Regional Vice-President, Jacob Vanderheide of Sarnia, spearheaded a movement to organize Ontario locals. The culmination of these efforts came this spring with the official formation of the Ontario Council of the NHBA under the chairmanship of H. P. Hyatt of Toronto.

Carrying on Mr. Lount's progressive policies, President William M. McCance is ensuring that his Association keeps pace with changing times. At his suggestion during the mid-summer directors' meeting at Saskatoon, official approval was given to the formation of special committees to enquire into trends in multiple-family housing, the home-improvement market and urban renewal and public housing. "We must be aware of trends within the industry and ready to point the way to new horizons if our Association is to meet its commitments to the NHBA membership and the Canadian people," Mr. McCance told his directors. In keeping with this thought, the NHBA president recently presented a submission to the Royal Commission on Banking and Finance at Ottawa. The document chronicled the course of Canadian house building since the post-war period and contained several recommendations to ensure adequate mortgage financing to meet future industry requirements.

NHBA members may be celebrating two decades of achievement at the 20th Annual Convention at Halifax next year, but the Association's leaders will be more concerned with the road ahead. Constant improvement of the quality and character of Canadian homes is still the major objective of the National House Builders Association. ✦✦✦

Mr. C. Gordon Ryan was born in Ottawa in 1924 and during World War II served with the Canadian army for 2½ years. After the war, Mr. Ryan became a member of the staff of the Ottawa Journal as a sports writer and remained with that paper for six years. He joined the Information Division of Central Mortgage and Housing Corporation in 1952 and left that post to become Director of Public Relations for the National House Builders Association in 1960.

L'AUTOROUTE, Phénomène d'urbanisation

par Guy Poliquin

C'est de l'aspect technique des problèmes relatifs à la conception d'autoroutes dont il sera question dans cet article. Il ne s'agit là que d'une perspective fragmentaire, car la technique n'est qu'un moyen.

Quel est, en effet le but que se propose l'infrastructure d'une autoroute? Tout simplement d'apporter sur le plan qui lui est propre tous les éléments favorables à la circulation. Pour la solution des problèmes de la circulation on fait appel à des moyens, à des techniques et également des phénomènes économiques.

PROLONGEMENT SAINT-JÉRÔME-STE-ADÈLE

Ainsi, la construction de l'extension de l'Autoroute des Laurentides, de Saint-Jérôme à Sainte-Adèle, soit une longueur de 17.2 milles a été commencée au début du mois d'août.

Ce tracé, qui suivra plus ou moins le corridor laissé libre par l'ancienne voie ferrée du Canadien National jusqu'à St-Sauveur, a été modifié, à la satisfaction de la population de cette localité, afin que cette dernière ne soit pas sectionnée en deux par l'autoroute.

En ce faisant, l'Office donne suite à des recommandations faites par M. Roger Gagnon, urbaniste-conseil, à la requête du conseil de ville de Saint-Sauveur.

D'après les plans, la voie de prolongement bifurquera vers l'ouest de l'autoroute actuelle à environ 3½ milles au nord du poste de péage de St-Jérôme. Entre St-Jérôme et Saint-Sauveur, il y aura des carrefours d'accès et de sortie à la montée Meunier, à Lesage, au chemin du lac Guindon, à Avila et au sud même du village de Saint-Sauveur.

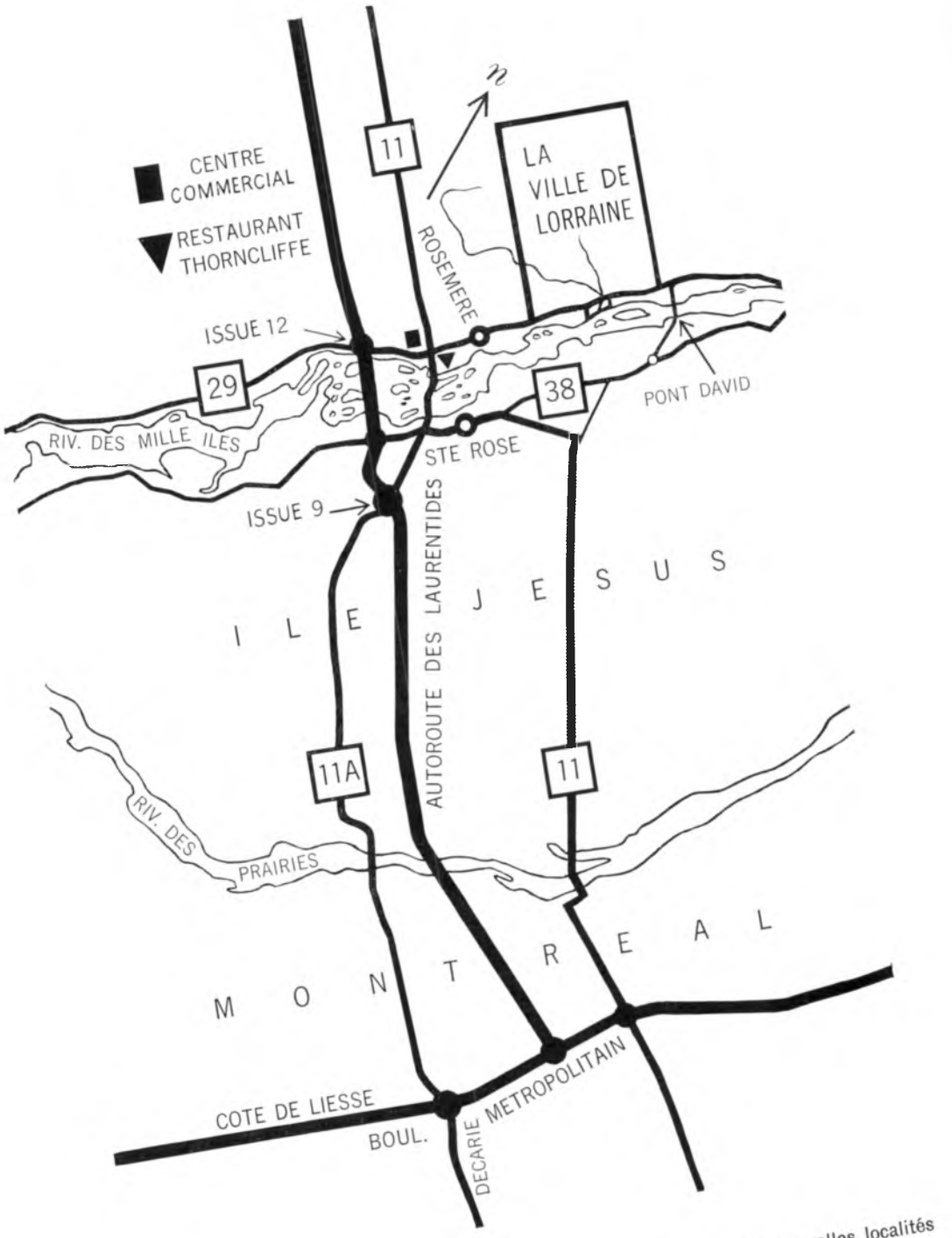
De Saint-Sauveur, l'autoroute bifurquera vers le nord-est pour atteindre la rivière Simon, au pied du versant sud du mont Gabriel, où sera construit un autre raccordement.

Le tracé contournera ensuite le mont Gabriel pour traverser le chemin du lac Renaud, emprunter l'ancienne route 11 et venir rencontrer la route 11 actuelle, en face de la nouvelle école secondaire régionale des Laurentides.

A cet endroit, l'autoroute empruntera la route 11 actuelle, que l'on remplacera par des voies parallèles à sens unique, jusqu'au pont de Mont-Rolland où il y aura un autre raccordement. Du pont de Mont-Rolland, l'autoroute passera à travers champs pour croiser la route de Sainte-Marguerite, près de la rivière aux Mulets, où un raccordement permettra la liaison avec Sainte-Marguerite et l'Esterel.

Enfin, on bifurquera un peu vers l'ouest pour retrouver la route 11, après avoir traversé la rivière aux Mulets et le chemin de Val David et Val Morin.

La longueur totale de l'extension sera de 17.2 milles, portant ainsi l'autoroute des Laurentides à près de 48 milles. L'automobiliste se rendant dans la région de Sainte-Adèle déboursera donc environ 2 cents du mille, soit moins que la moyenne courante aux Etats-Unis, ce qui représente indubitablement une économie tout en offrant des facteurs accrus de



Carte de l'autoroute Montréal-St-Jérôme indiquant l'emplacement des nouvelles localités avoisinantes.

sécurité.

L'extension aura deux voies dans chaque sens, séparées par une bande médiane ou terre-plein variant de 4 à 50 pieds. L'emprise prévoit d'ailleurs l'espace que pourraient nécessiter deux autres voies entre St-Jérôme et Mont-Gabriel. Si ce tracé nécessite 20 courbes, on note qu'aucune ne dépassera 4°. Quant aux pentes, elles ne dépasseront pas 4 pour cent, sauf entre St-Sauveur et Mont-Gabriel où il y en aura une de 5 pour cent. Enfin, cette extension nécessitera la construction de 18 ouvrages d'art.

TRACÉ DE L'AXE

Il convient de signaler qu'avant de décider de l'implantation de l'axe d'une autoroute et de l'importance des surfaces à lui destiner, il a fallu décider de sa nécessité, de son utilité, ou voir à combien de millions pour les autoroutes telles que Montréal-Ste-Adèle et Montréal-Sherbrooke, correspond une telle décision. Ce sont des considérations d'ordre économique évidemment qui la dictent.

A partir du moment où une décision a été prise, parallèlement aux nombreuses recherches et aux plans techniques qui concernent la construction d'une autoroute, une série de problèmes se posent, aux solutions difficiles, aux incidences multiples, dont la solution doit permettre à l'infrastructure d'être, pour chaque cas, aussi exactement que possible adaptée à la fonction.

L'Office des Autoroutes doit s'arrêter aux problèmes de la nécessité de l'implantation, de l'importance, du financement de la gestion et enfin de la rentabilité.

L'opportunité de l'aménagement d'une autoroute ne donne pas lieu à de longues discussions, lorsque pendant des années, elle est dictée par l'engorgement et l'étouffement des véhicules dans les milieux urbains. Les décisions se fondent sur des études de trafic, sur des prévisions, sur des considérations concernant le développement et le changement des grands mouvements économiques et touristiques.

L'aménagement est arrêté; reste à décider de l'implantation: c'est-à-dire, qu'il reste à déterminer l'emplacement de l'autoroute dans l'ensemble urbain, local ou régional.

Les questions techniques peuvent, ici encore, doubler les questions économiques. Celles-ci sont cependant prépondérantes dans tous les secteurs de la Province. Les expropriations non contrôlées peuvent être très onéreuses!

Dans le passé, lors de la construction de nouvelles routes provinciales, certaines villes ont voulu voir leur territoire sectionné en deux, alors que d'autres villes n'ont pas voulu avoir de telles routes aux centres urbains. Ce problème est beaucoup plus grave lors de l'implantation possible d'une autoroute!

Il faut donc, après avoir réuni tous les problèmes, tenter une solution fonctionnelle: il faut, par exemple estimer que les grands mouvements de circulation régionale continueront à influencer les grands centres urbains. Il faut souvent rappeler aux intérêts locaux, qu'il est dans l'intérêt général de ne pas donner à telles agglomérations des voies d'accès à tous les deux ou trois cents pieds!

La circulation locale ne doit en aucun temps, gêner la grande circulation rapide!

Une fois résolues les questions d'opportunité, d'implantation, d'importance, d'urbanisme, se pose celle du financement. On recherche, en matière d'autoroutes, comme en toute autre, à construire aux moindres frais, l'outillage le mieux adapté au travail prévu. C'est ce qui est délicat; les prévisions sont sujettes à vérification constante. Il faut prévoir qu'il est essentiel d'établir le bilan futur de l'infrastructure et de la circulation pour une période déterminée. Le bilan paraît convaincant, l'engorgement de la grande circulation entre les villes justifie les investissements prévus; il importe alors de recommander l'aménagement ou le prolongement d'une autoroute.

L'autoroute achevée, on doit alors définir les conditions de gestion. Il faudra à tous les jours surveiller les recettes! C'est encore un problème que de fixer les péages de façon à ce qu'ils ne soient pas disproportionnés aux frais d'infrastructure, sans décourager pour autant la circulation régionale.

Les questions d'infrastructure posent de sérieux

CORBEAU

Le nouvel hôtel L'Esterel au bord du lac Masson.

Section de l'autoroute Montréal-St-Jérôme, vue du Boulevard métropolitain.

problèmes à l'Office des Autoroutes, et l'Office ne tente pas de les éluder. Nous tentons, au contraire, de bien prendre conscience de leur complexité pour essayer de les résoudre dans le cadre, non pas seulement de la circulation, mais de l'économie et de l'urbanisme régional.

Du point de vue technique, le tracé d'une autoroute dans les agglomérations doit être conçu suivant des principes différents de ceux dont on fait l'application pour le tracé en rase campagne, ou bien sur un territoire accidenté. En dehors des centres urbains, on s'efforce de joindre par des lignes droites les différents points à desservir parce qu'elles assurent une meilleure visibilité et par conséquent la sécurité de la circulation.

Il faudrait que tous les centres urbains soient d'accord pour souhaiter que le tracé d'une nouvelle autoroute évite le coeur urbain où la circulation est déjà confuse, il importe d'éviter le marasme, le chaos total!

Une autoroute organise rationnellement la circulation, elle évite des pertes qui viennent de l'usure prématurée des véhicules, ou du gaspillage de temps et de combustible, et enfin des accidents.

Pourquoi demander qu'une autoroute s'engouffre dans une ville. Il importe que les municipalités comprennent qu'une autoroute accommode la circulation de transit et celle d'accès et de sortie d'une municipalité et qu'elle doit donner priorité à la grande circulation.

Les municipalités devraient prévoir à leur plan directeur un réseau routier reliant entre eux les quartiers d'affaires et de résidence, de travail et d'habitation.

Signalons que de nombreux projets domiciliaires s'amorcent très activement dans les Laurentides uniques au monde par leur charme et leur solitude; mentionnons, entre autres Lorraine, Avila, Sainte-Thérèse-en-Haut, Mont-Gabriel, Esterel, etc.

Tous ces projets situés à proximité de l'autoroute connaissent un essor considérable et donnent lieu à des mises de capitaux énormes.

Ces secteurs offrent un attrait touristique incalculable; en effet, plus de 200,000 véhicules circulent sur l'autoroute en fin de semaine lors de la saison estivale.

PROBLÈMES CONNEXES

Une autoroute exige, lorsque la topographie s'y prête, des tracés rectilignes, avec un minimum de courants transversaux. Il ne serait donc question de permettre que plusieurs voies de nouveaux secteurs domiciliaires viennent y aboutir.

L'Office des Autoroutes considère que chaque agglomération est un point attractif dont l'importance varie avec son développement économique, celui de sa région environnante, sa démographie, ses liaisons routières et ferrées. Ainsi, on sait que parmi les véhicules se dirigeant vers une ville, le pourcentage de ceux qui la traversent sans s'arrêter est d'autant plus grand que le chiffre de la population est moins élevé. l'Office s'efforce donc de faciliter l'accès vers les grandes villes, les développements touristiques importants, les secteurs commerciaux ou industriels importants.

On constatera que les abords de l'autoroute et des voies destinées à donner accès à ces secteurs sont en général éloignés des habitations. Ces espaces libres aux étagements de voies offrent des perspectives plantées très intéressantes.

Quant à la détermination des tracés de l'axe d'une autoroute, en dehors des facteurs déjà mentionnés, et de la nécessité de ne pas dépasser un certain pourcentage de pente (5 à 6% au maximum), certaines autres considérations interviennent.

L'Office des Autoroutes tente le plus possible d'éviter les développements domiciliaires; toutefois, on constate que souvent les promoteurs se lancent dans la construction de nouveaux projets domiciliaires à proximité de l'autoroute. Il serait désirable que les municipalités du Québec, par des plans de zonage fonctionnels réservent à d'autres fins, les territoires adjacents à une autoroute, en vue d'éviter une dépréciation trop rapide de ces zones domiciliaires.

Ainsi, l'Office des Autoroutes, dans un esprit de collaboration, et grâce à un plan d'urbanisme bien conçu, a voulu épargner St-Sauveur, un village très pittoresque des Laurentides, tout en lui assurant

L'hôtel Chantecler, à Ste-Adèle, connu universellement comme centre de vacances.

un avenir économique et touristique des plus enviable.

On sait d'une part, que dans les quartiers résidentiels les réseaux locaux doivent être adaptés à la notion du terrain bâti et aux besoins de la population. A l'opposé des réseaux de grande circulation leur tracé doit décourager et ralentir la circulation.

L'Autoroute, d'autre part, doit accommoder la grande circulation; elle doit vivifier l'économie des villes.

Nous sommes à l'ère atomique, nous sommes à l'ère des satellites. Nous n'avons plus à nous contenter d'hypothèses! Les réalisations d'autoroutes ne manquent pas dans tous les pays. L'autoroute a raccourci la distance et le temps. Les villes, grâce aux autoroutes, se rapprochent!

Pour aboutir à de pareils résultats, des plans, des tracés, des aménagements doivent être réalisés le plus parfaitement possible.

Dans le passé, des villes ont poussé au petit bonheur, sans plan d'ensemble; des voies ont été réalisées selon des croyances, selon mille contingences. Il nous faut profiter des leçons du passé!

Ainsi, l'Office des Autoroutes, est convaincu que le prolongement de l'autoroute déjà existante entre Montréal-St-Jérôme jusqu'à Ste-Adèle de même que la nouvelle autoroute des Cantons de l'Est sont essentiels et de répartition logique.

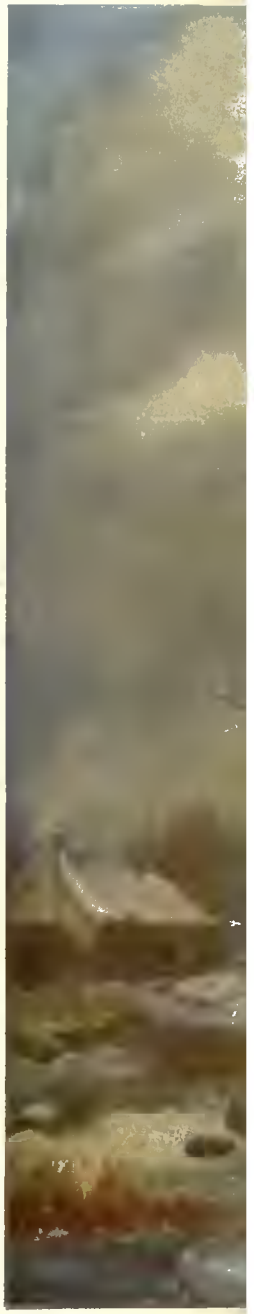
L'Office souhaite que les municipalités voisines des autoroutes intègrent bien dans leur plan directeur leur tracé. Des autoroutes leur permettront de compléter le système des artères principales, de consolider l'utilisation du sol, tout en assurant, dans leur milieu respectif des mouvements véhiculaires plus libres.

Ainsi, il n'y a aucun doute que l'aménagement des autoroutes prévues par l'Office, assurera un développement rationnel des vastes territoires.

Aussi, l'Office souhaiterait que l'évolution des régions des villes se réalise de façon ordonnée selon une planification intelligente, pour assurer à la population du Québec un cadre de vie agréable.✦✦

GABY

Monsieur Poliquin est né à Trois-Rivières. Il est Bachelier es Arts de l'Université Laval de Québec et il a étudié le droit à l'Université de Montréal. Il a été Officier de Liaison pour le ministère provincial du Travail, il fut secrétaire particulier du Premier Ministre de Québec en 1942, il devint Officier des relations extérieures à l'Hydro-Québec en 1944. Il a accédé au poste de Président de l'Office des Autoroutes du Québec après la démission de son prédécesseur, M. Ernest Gohier.



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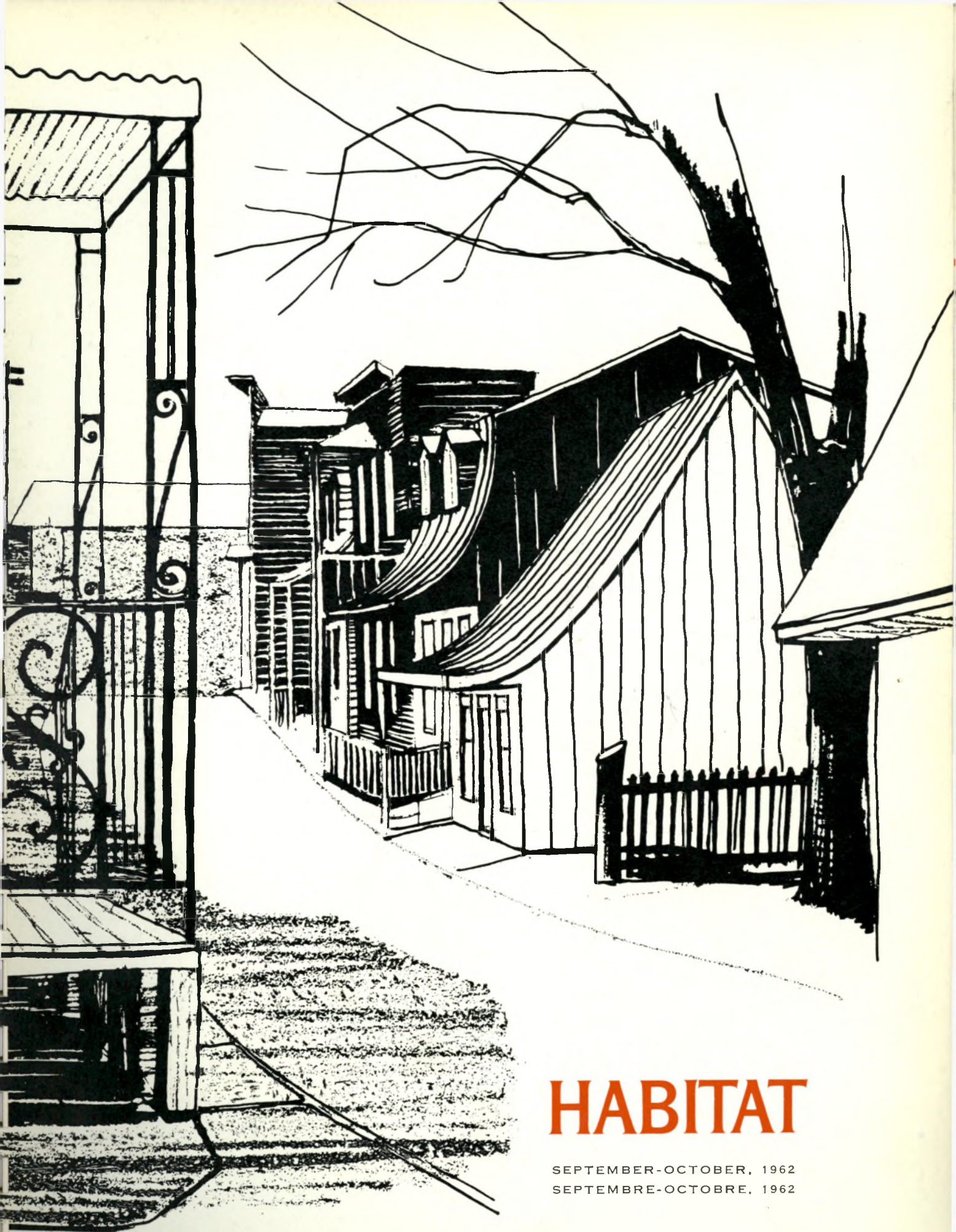

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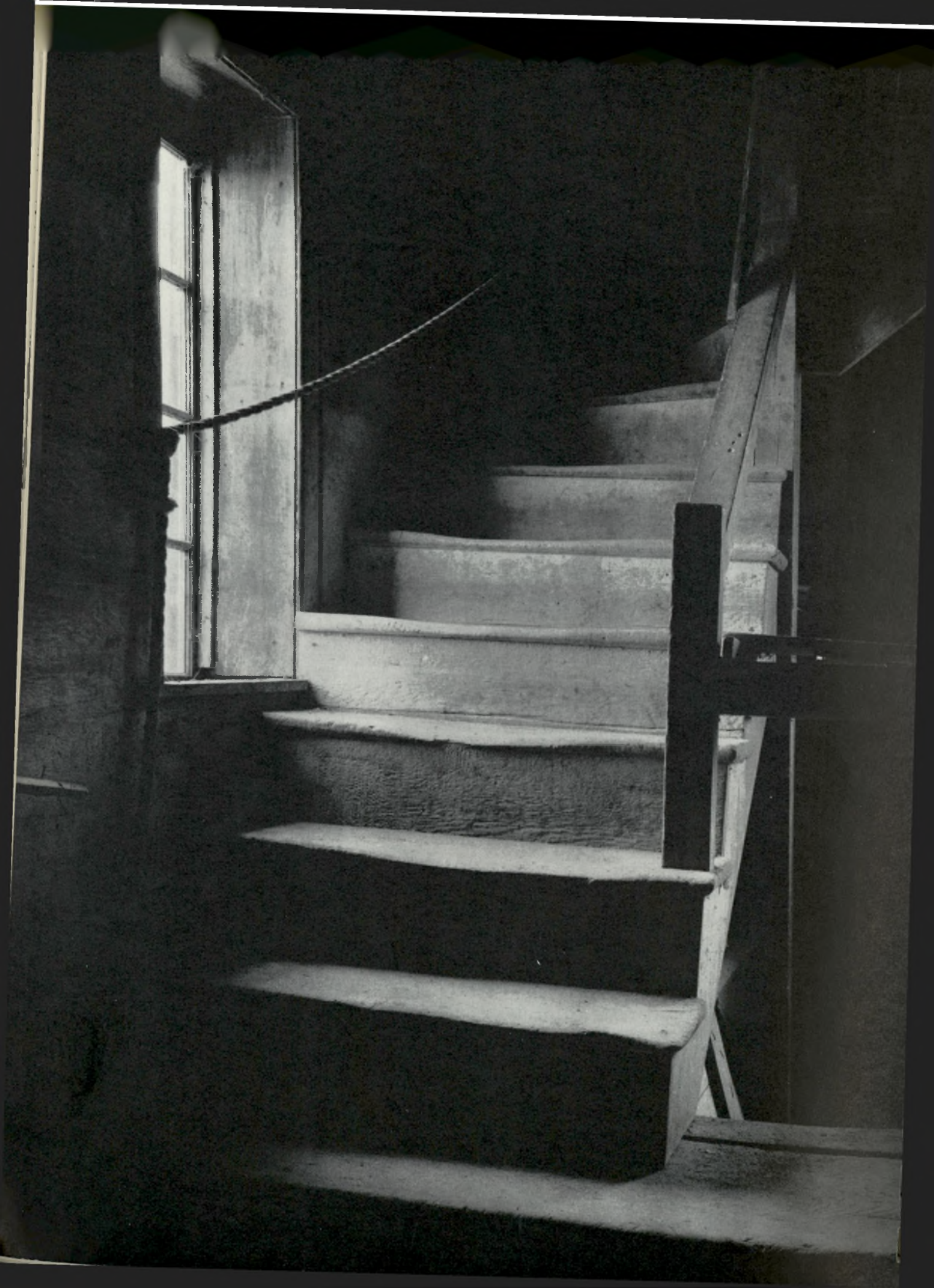

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FRONT COVER: *The cover sketch is by Architect Stanley King who has a great interest in vintage Canadian housing. His Elegy to Housing appears on Page 12.*

INSIDE COVER: *These stairs, constructed of white pine and situated in the Backus Mill at Port Rowan, Ontario, have felt the tread of innumerable feet for the past 164 years.*

"To encourage and promote urban and regional research wherever it can be carried out most effectively" is the objective of the newly formed Canadian Council on Urban and Regional Research. The Council has received two grants: one of $78,000 from the Government of Canada through CMHC to cover operating expenses until December, 1963; and the other for $500,000 from the Ford Foundation which will be used over a five-year period to assist research work throughout Canada. In its discussions to date the Council has emphasized its consultative and co-ordinating character; its desire to act as "a Canadian clearing house of ideas on urban and regional research and their implementation".

In the building of cities critical decisions have to be made in such a way that the needs of the future will not too severely strain the resources of the present generation. At present the many problems created by these conditions are faced by professional, educational and administrative organizations with insufficient opportunity to benefit from one another's experience. Inter-communication between those mainly concerned in the problems of the urban environment is hampered by an inadequate accumulation of case histories and by the absence of an organization to promote a continuing exchange of ideas.

HABITAT will watch with interest the work of the Council and will bring our readers progress reports on the developments.

✦ ✦ ✦

THE HOUSING CHOICES OF FRENCH CANADA

by Michel Barcelo

It is anticipated that the present housing stock in Canada will have to be doubled by the year 1985 and in line with post-war trends the increase will be almost entirely in the urban areas. During the period, Quebec will undoubtedly show a greater increase in urbanization than any other province and it has been estimated that 25 years from now, 75% of its population will be living in cities and towns.

Of course, this is a challenge that is not only common to North America, but to a certain extent is world-wide. However, in Quebec there are peculiar and specific implications. The largest province in Canada will be concentrating half of its population in the one and only Metropolitan Region —the Montreal area. The next 20 years will see 3,500,000 inhabitants who will require nearly 500,-000 new housing units in this small section.

These predictions should be frightening enough to compel us to pool our thoughts on urban living and its special implications in French-Canada if we don't wish to repeat the errors of the past on a fantastic scale and if the people of French-Canada wish to maintain their own environment. A policy of laissez-faire allowing the Metropolitan Montreal area to continue its trend of suburban sprawl would mean the misuse of 500 square miles of rural land in the environs of the city in a manner that is doubtfully related to the French-Canadian heritage.

Housing needs of the future should be molded on the people's conscious or unconscious needs and choices:

> What do they desire their house and their environment to perform?
>
> What price are they willing to pay for housing?
>
> What is their cultural attitude and philosophy of life towards housing?

These are the questions that must be answered before a decision can be reached on what the people require and how they can be convinced that certain housing types and a certain environmental design will not only assure their needs, but be a part of their economic, social and cultural evolution.

For these reasons we should take a look at how French-Canadians are now living in a city like Montreal—their existing housing choices, the life in their neighborhoods and parishes. Where a certain type of living and certain habits are being built up by the people, it is an absolute necessity to have future housing needs molded on existing housing. The analysis must certainly not only be in the realm of sociology but of geography and history. We

should be looking at what now exists because it represents the choice of the majority—the typical, the anonymous dwelling.

In 1881, French-Canada's rural areas still accounted for 80% of its total population. That means that its pre-urban era lasted for over 250 years and that its urban traditions are not more than 80 years old. We should even add that the enjoyment of urban life by a fair proportion of its population does not date back for more than a generation.

But for various reasons, mainly the French-Canadian cultural heritage and the desire of a minority to keep its identity from outside pressures, our communities have always been closely-knit ones.

Our villages and small towns, compared with New England or other Canadian communities, were much less "suburban" in tradition. Built as parishes with the basic social and religious nuclei having the church as their focal point, there was not much room for large open spaces. The smaller centres were closely built-up and the main street was never a large space to separate "castle" from "castle", but an enclosed "square" for people to remain within or to look from their balconies. Social and communal life had its expression by using streets in much the same fashion as in mediaeval towns. This cultural choice, by which the street is a space where people become citizens, was of such importance that French-Canadians were ready to lose much of their privacy to group their houses very close one to the other. All of the land subdivision, even in rural areas, bears that need to live very near to neighbors.

The industrial era, a result of the shift of Montreal's predominant role from trade and commerce to manufacturing at the end of the 19th

A closely-knit community: a French-Canadian Parish.

century, acted as a magnet for the surrounding rural popuiation, providing a cheap and responsive labor force.

The housing needs of these people had to be filled quickly without thought of future consequences and the solution, up to 1940, has invariably been a certain type of multi-family structure, forming very closely-knit communities. This type of housing and its grouping is the consequence of an industrial revolution which French-Canada did not prepare or control; it is a rapid answer to a fast urban growth and shifts of population from rural to urban settlements. But since this type of housing now forms more than half of the housing stock of Montreal and since this is where the vast majority of French-Canadian children are learning what a city is and how to cope with it—where their dreams and future needs are taking shape, where they are becoming conscious of their identity—it is worth looking at closely to evalute more recent developments and to foresee future trends and solutions.

Since we are not only dealing with individual houses, but with housing as a part of town-building, three problems will hold our attention: the ownership system, the street pattern and the buildings proper—the latter not as works of architecture, but as answers to a housing program.

While most North Americans own their dwelling place, it is rather surprising that the vast majority of French - Canadians are tenants. In Montreal, for example, seven out of 10 dwellings are tenant-occupied, exactly in reverse proportion to Toronto. What are the reasons for such a situation? Is it economic inferiority or just a way of life which does not give the ownership of a dwelling place the same importance it has on the rest of the continent?

According to Lacoste,[1] this difference cannot be explained only by differences in income; for equal earnings, the proportion of owner-occupied dwellings is always less in Quebec than in any other region of Canada. Even amongst professional people, the vast majority are in the tenant group in the Province of Quebec. The only exceptions to that predominant rule are the large families, and the explanation of this lies in the fact that accommodation for that group is non-existent in rental housing.

It seems that a situation which cannot be explained by reasons of income limitations can be accounted for only by a different attitude towards home-ownership—by a definite cultural choice and cultural values. It surely means that for a vast majority of Montrealers, a house is not thought of as a castle which a family holds for many generations, but rather as a useful "machine à habiter" for its inhabitants and as an investment for its owner. Judging from the *actual behavior,* and not from the dreams of French-Canadians, home-ownership does not seem yet very important as a social phenomenon.

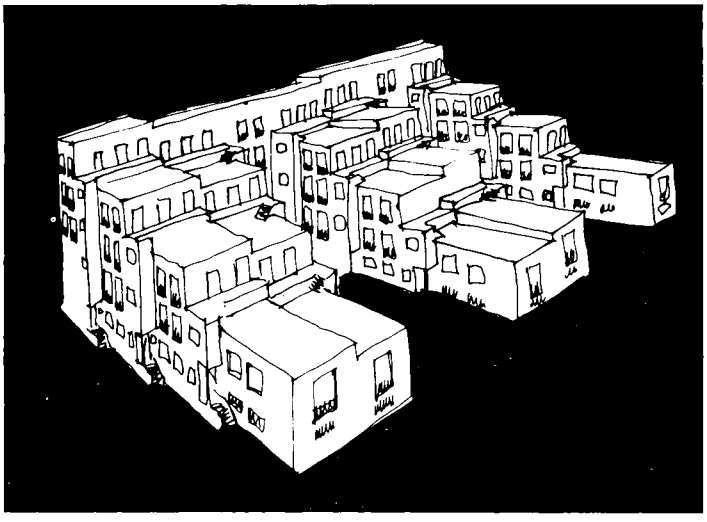
This choice may seem behind the times for the average North American. A set of correctives has been set up to discourage an attitude so healthy that it was judged backward. The surprising thing is that when it was not asked for by French-Canada, the promotion of small house design, small house building and small house ownership has been imposed on French-Canadians by mortgage companies and the Federal government through Central Mortgage and Housing Corporation.

In a predominant rental housing market, it is rather surprising to see that no official encouragement has been given to improved rental units. Mortgaging has always been partial to owner-occupied single-family dwellings and while the book "Small House Designs" was much publicized, rental housing was left to itself to find new trends and new ways of creating a valuable environment. Of course some pleasant high-rise apartment buildings have been built in Montreal, as in any other large city, but they answer the needs of the new sophisticated population of large cities, not the basic problem just described as typical of Montreal.

Could the future not see more attention given to this problem? Future considerations should be based on the actual rental units, their performance in the task of providing shelter and home atmosphere and the way their grouping caters to communal life.

There is nothing original in the street pattern of Montreal: it derives from the subdivision of farm

[1]Abbé Norbert Lacoste, *Les Caracteristiques Sociales de la Population du Grand Montréal.*



Adolf Loos — A group of twenty villas 1923.
A far-sighted exploration of
three-dimensional planning and grouping
of housing units, each with
its individual access, which could
give us an example of the design
potentialities of dwellings suited to
the actual needs of French Canada.

Typical housing units of Montreal: three-storey walk-ups, housing three families
on 30-foot wide properties, with their exterior access stairways and balconies.

Informal grouping of houses and
balconies tumbling down the hill
below Sherbrooke Street
in Montreal's east end.

land in the grid system of long city blocks, 200 feet or so wide, divided in very narrow lots, 25 to 30 feet wide, on which the typical multi-family rental units have been built. There are of course exceptions and other types, but these structures are the usual answer to the rapid urbanization of the last 50 years. Dwellings are piled up to a considerable extent on such narrow lots with three to five families accommodated in two to three-storey buildings, each with its individual access from the street, either by an outside or an inside *individual* stairway. These walk-up flats give their tenants a very crowded environment (the highest densities of Montreal being found within these neighborhoods), but they have the feeling of privacy in an individual dwelling unit with accessibility directly from the meeting-place, the sidewalk and the street. This relationship to the meeting-place is emphasized again by the balcony which makes possible direct participation into the communal life from an extension of the private dwelling-place.

The fact is that such a program, if it had been understood by capable lenders and imaginative designers, could have produced a very interesting residential environment and lively housing units. And although this type of design has been absent, it does not mean that the possibility of building housing units based on these basic living habits and requirements should not be part of the thinking of architects, planners and builders for the future.

The coming of age of French-Canada to an urban tradition is full of unexplored potentialities; it could lead to an urban maturation of existing small communities, parishes and large villages, which are slowly forming the largest Canadian city; to the maturation and improvement through a higher standard of living of urbane living habits. Now that they have succeeded in forming a large enough middle-class, French-Canadians can achieve real city life.

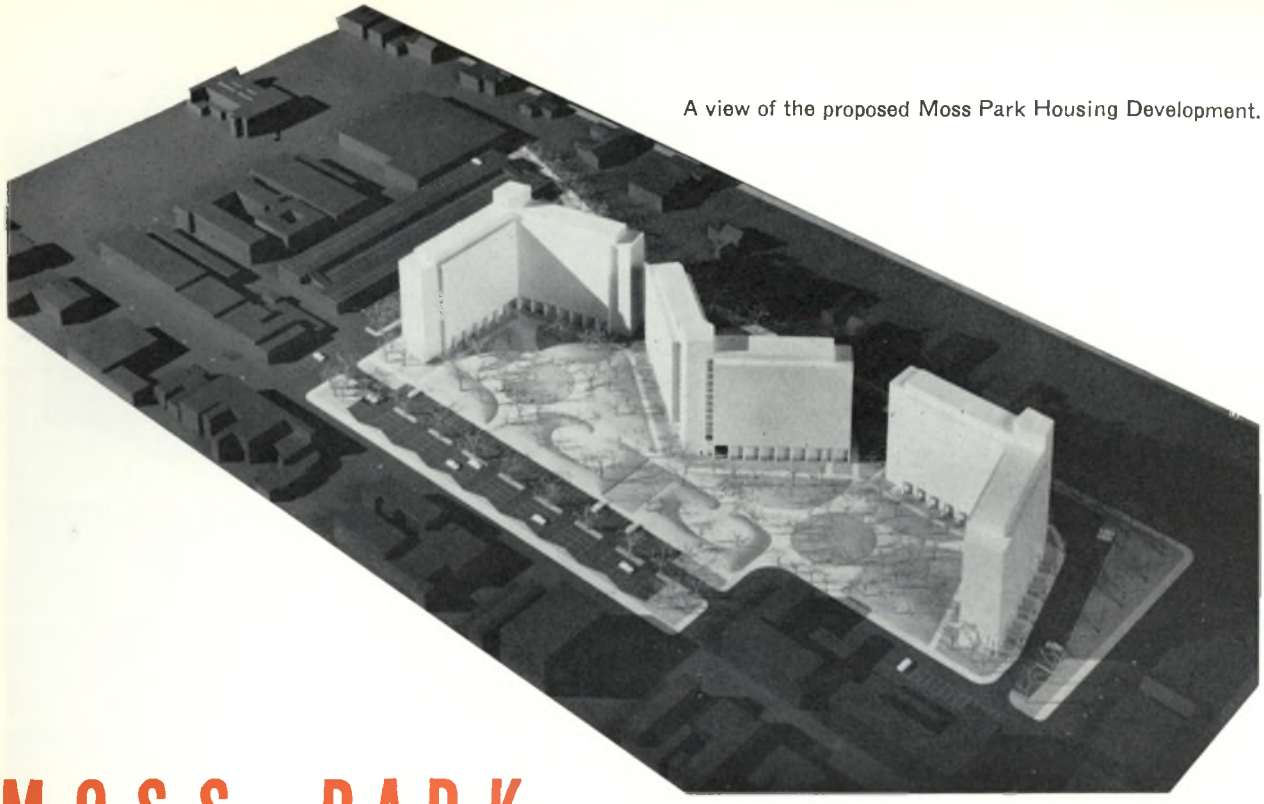
The mass building of individual owner-occupied houses in a sprawling suburbia which may belong to the American heritage of small-town life, can't be part of this endeavor. We would seem to be asking for a more vivid life, where "potential interaction between people should be as high as possible, as long as the individual can control it and shield himself whenever desired and his front door, figuratively speaking, should open on a bristling square, and his back door on a shielded park."[1]

Could we not, from these considerations, re-evaluate our housing policies and, instead of going on with the *mass-application of misunderstood principles,* use some of our creativity to produce a genuine and diversified environment for French-Canada, which is determined to cope with the problem of keeping its identity?

The need for shelter is of course universal, and the writer does not pretend that French-Canada is such an original type of society that the answer to its housing needs will not coincide with what is found in other countries. But the design of new housing units and a new urban environment is as much a cultural as an economic undertaking; it should advocate existing cultural values which are worth keeping. Our task should not be to spoil specific choices just because they don't comply with those of our neighbors. But on the contrary, there lies an opportunity in our Federal system, a system of political differences of regions, which allows for far-reaching economic, legal, cultural and moral experimentation. ✦✦✦

[1]Kevin Lynch, *The Future Metropolis.*

Michel Barcelo made his classical studies at the Jean-de-Brebeuf College where he obtained his Bachelor of Arts degree in 1956. In April 1961, he obtained his diploma from the School of Architecture at the University of Montreal. While attending university, he was awarded a travelling scholarship by Central Mortgage and Housing Corporation to make a study of housing and the Canadian living environment.



A view of the proposed Moss Park Housing Development.

MOSS PARK

by George D. Gibson

The Moss Park Redevelopment Area, half-mile long and a full block wide, is located in an old section of downtown Toronto bordered by Jarvis, Shuter, Parliament and Queen Streets. It is a short distance from the main downtown shopping and business district close to public transport which operates on Queen and Parliament Streets.

Moss Park was the estate of The Honorable G. W. Allan, a prominent Toronto businessman and at one time Speaker of the Senate, but the original residence was demolished about 1905. The present site was designated as a redevelopment area by City Council in September, 1959, and in May, 1961, the official plan was adopted.

Block A which fronts on Jarvis Street is to be leased for controlled institutional development, while Block B is being developed as public open space. Block C, with which this article is principally concerned, is being developed by The City of Toronto Limited Dividend Housing Corporation Ltd. as a medium-rental housing project.

In June, 1961, the three firms of Somerville, McMurrich and Oxley; Gibson and Pokorny; Wilson and Newton were appointed architects for Block C. The development of a satisfactory solution was seriously complicated by the variety of accommodation required and by three permanent easements which cut the property into four irregular parts. The solution attempts to provide the pleasantest possible accommodation within the strictest capital and operational budget. The buildings are located generally in the northern part of the site leaving the bulk of the green space to the south, where the shadows from the high walls will have minimum effect. The green space also acts as a substantial buffer between the buildings and the commercial and industrial area to the south and it is anticipated that the area to the north of Shuter Street will be redeveloped as a residential area and integrated with the Moss Park Scheme. The buildings are oriented to give a variety of exposures with only one face of one wing subject to the direct western sun; all the ground-floor tenants' gardens receive the full benefit of the sun.

The total area of Block C is 10 acres and with

These photographs illustrate the character of the neighborhood that will be replaced by the new Moss Park.

an expected occupancy of 1,765, the density becomes 176 persons per acre. The buildings will occupy 10 per cent of the total area while roads and parking spaces will occupy 40 per cent, leaving the balance of 50 per cent for open green space.

Initially it has been decided to provide parking spaces for 60 per cent of the units and the bulk of these will be accommodated in a depressed area at the western end of the property. Provision is made for increasing the parking to 75 per cent on the ground, while any further requirements will be met by decking over the western area.

The existing site is fairly level, with a five foot drop from north-west to south-east and has a number of fine trees, most of which can be saved. Interest will be created in the landscaping by incorporating artificial mounds of excavated material, planting of additional trees and by variety of paving materials. Play areas for small children will be imaginatively treated with sculptured climbing objects, sand pools, slides and other play equipment. The park area in Block B, including the well-equipped John Innes Centre, will provide recreational facilities for the older children and adults. The Centre may also be used for Tenant Association meetings.

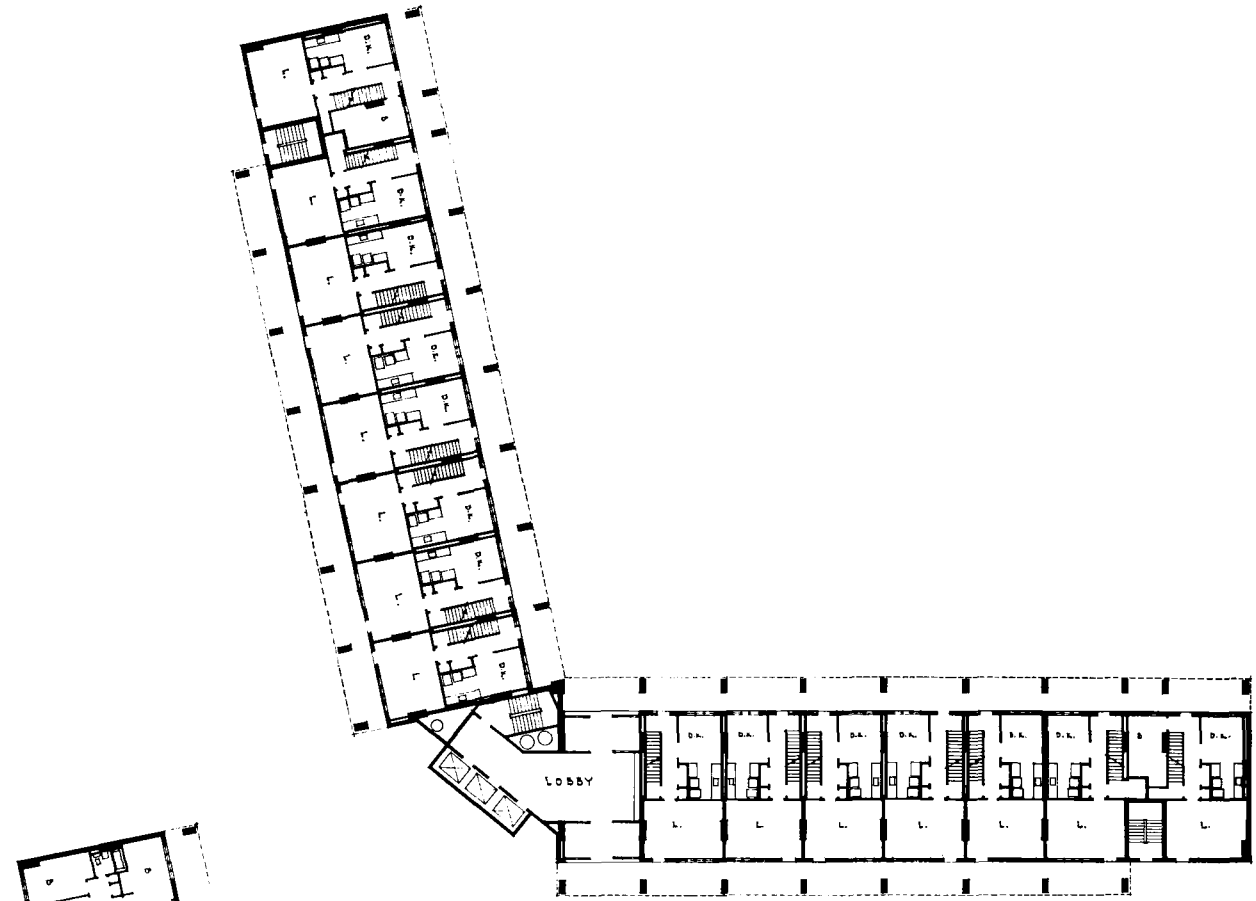
The schedule of accommodation is indicated in the accompanying table:

SCHEDULE OF ACCOMMODATION

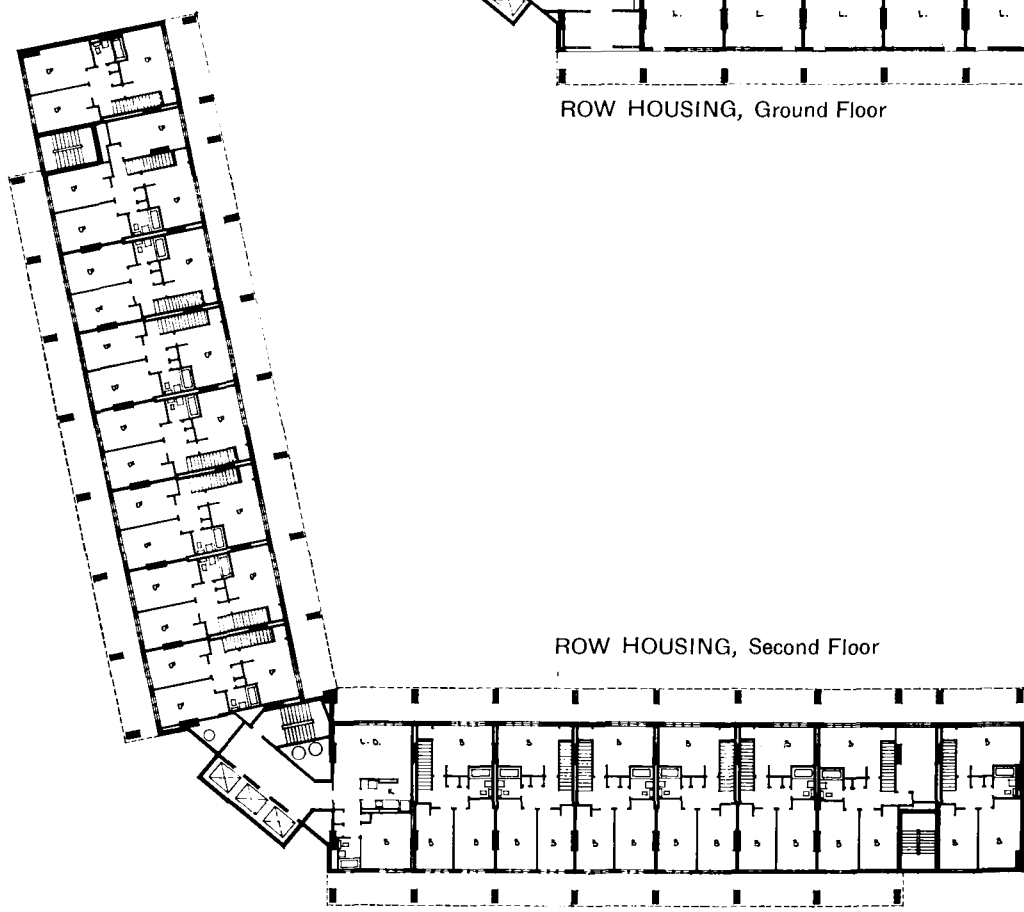
Type	%	Units	Persons		Children	
			Ratio	Number	Ratio	Number
Bach.	21	195	1.0	195		
1 B.R.	52	468	1.6	748		
2 B.R.	22	195	3	585	1.06	207
3 B.R.	4	33	4.8	158	2.8	92
4 B.R.	1	12	6.6	79	4.6	55
TOTAL	100	903		1,765		354

The apartments are housed in three identical buildings fifteen storeys high. The lower two floors of each building contain the three- and four-bedroom

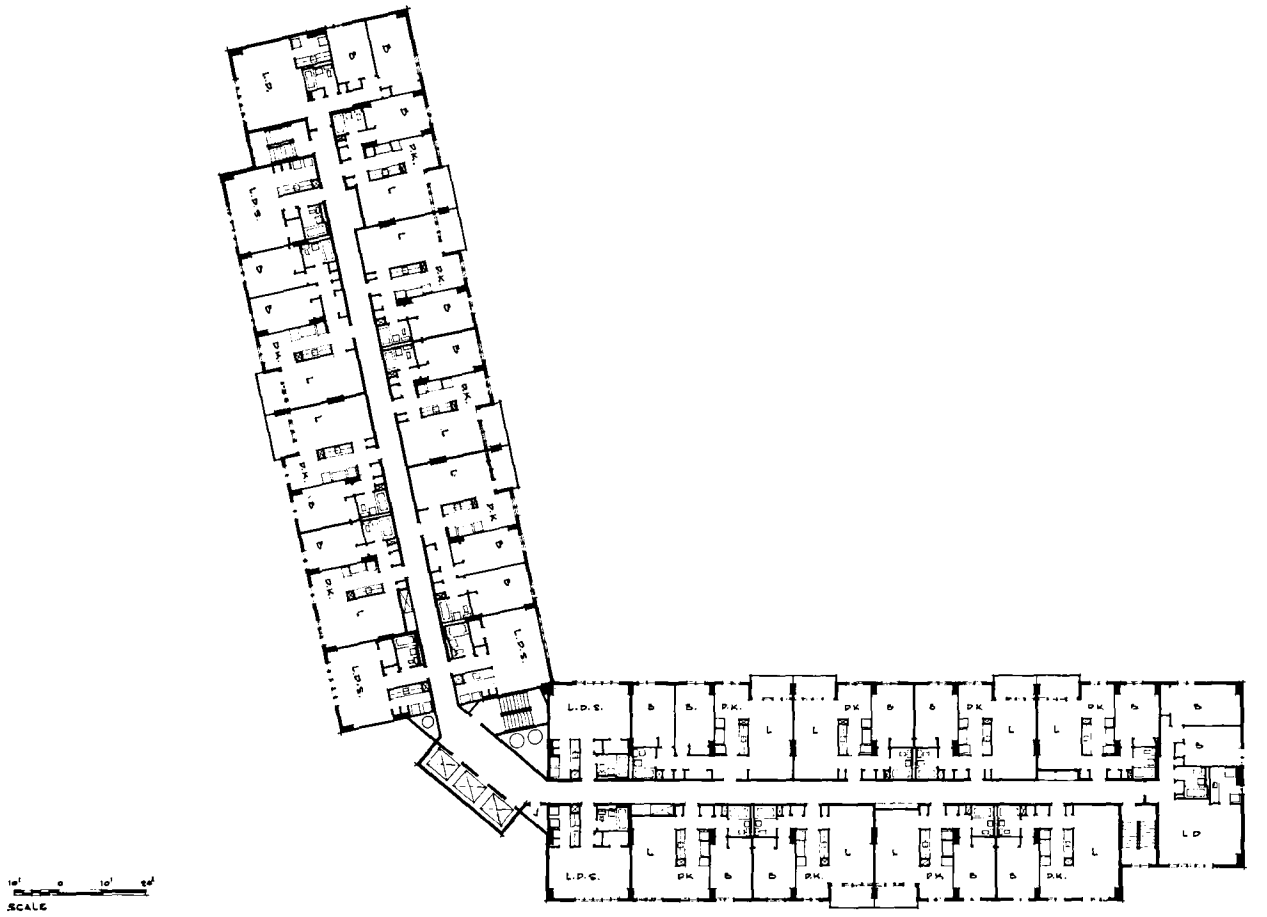

MOSS PARK GR ETERIA



ROW HOUSING, Ground Floor



ROW HOUSING, Second Floor



Typical Floor Plan.
Third to 15th floor of each building.

units, making them virtually row houses each with its own front and garden doors, private little garden, individual stairways to second floor and to cellar storage areas. Their only internal connection to the rest of the building is through the cellar to the general basement area for access to garbage incinerator and laundry (via elevator). As they are recessed on both façades, sheltered sitting and play areas are provided and a sense of privacy and domesticity should result.

The smaller apartment units are located on the upper thirteen floors and semi-recessed balconies are provided for 546 of the units. Penthouses, covering a large portion of the building area, house tenant lockers, laundries, playrooms and machine rooms. Each basement includes heating plant, incinerator room, electrical room, maintenance workshop and additional tenant lockers.

Central Mortgage and Housing Corporation has approved a mortgage of $7,800,000, the largest yet assumed for a limited-dividend project and the City of Toronto has authorized the issue of debentures for $1,900,000 to cover the balance of the estimated $9,700,000 cost. The rentals will range from $76.50 for a bachelor apartment to $101.00 for a four-bedroom unit. ✦✦✦

George D. Gibson is a graduate in Architecture from Princeton University. After five years' service as an officer with the Royal Canadian Engineers, mainly in the European Theatre, he joined G. K. Pokorny in the practice of his profession. He is a Fellow of the Royal Architectural Institute of Canada and a Past-President of the Ontario Architectural Association.

by Mr. Stanley King
who has worked with Central Mortgage and Housing Corporation and later with consultants preparing the Frobisher Bay New Town Report; he then joined Peter Dickinson's office as Assistant Chief Architect on the Bank of Commerce Skyscraper in Montreal.

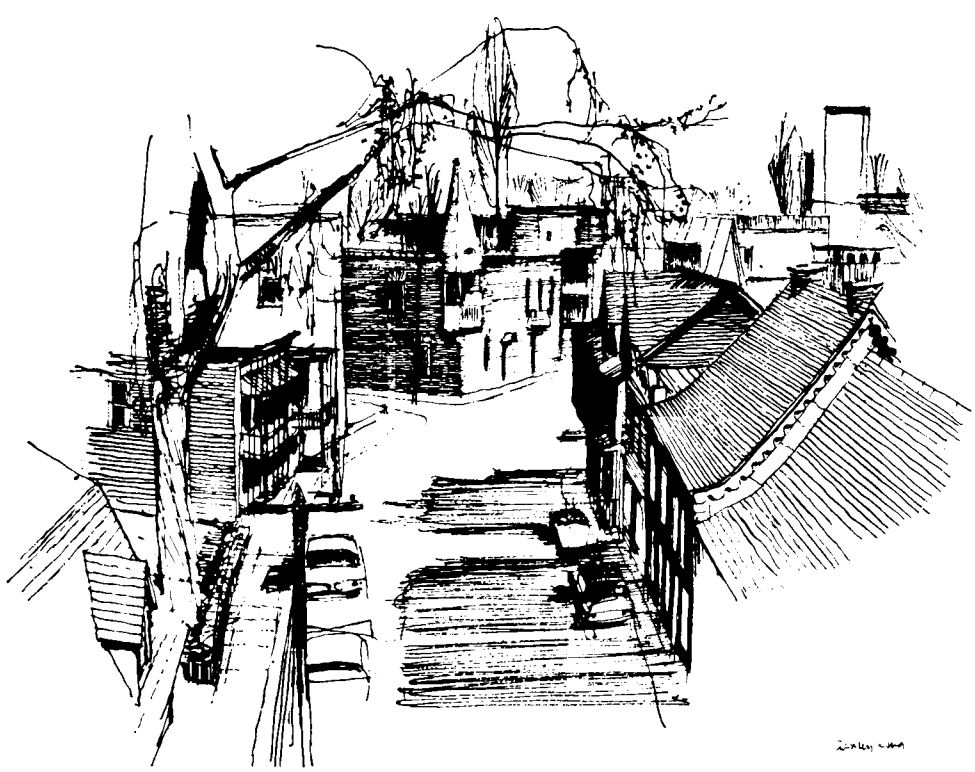
Elegy

Nearby my home west of Montreal are these streets and houses. They are not well-known views and will soon be gone. The houses located in Saint Anne de Bellevue will soon be replaced by a bridge —anyway the balcony centrepiece and the houses to right and left are decaying and tottering. Any day now the view will be gone. The sketch just catches a moment in time.

Often this spring I have been too late. Exquisite streets noticed on a Saturday morning have been changed by the time I return for another look on Sunday. In two cases the removal of a double balcony and the tarpaper facing of key buildings have altered the appearance, making me realize just how brief is the moment in time. It is a moment of evolution.

It is appalling that it should happen so quietly. So many of these town streets and squares are gems of urban domestic streetscape and eminently worth studying. They are excellent visual solutions of urban dwelling problems—problems now being featured in the architectural press. On that count alone they could be studied by architects and planners, but this subject is much wider and is everybody's business and should not be kept within the profession.

So what is to be done? Here, going unused, are full scale educational models for teaching townscape and we have been taught the phrases to describe and analyze and yet we are silent. We should be talking and pointing and showing photographs to councillor, teacher, parent and child. Why is this evolution so appallingly silent?



HABITATION ET RÉNOVATION URBAINE À ROTTERDAM

par Roméo Mondello

Chez nous, au Canada, nous sommes en pays jeune, riche, immense. A Montréal, on voit à profusion de ces maisons unifamiliales isolées ou jumelées; ce sont des types d'habitations que l'on voit rarement dans les pays que j'ai visités, où le sol est trop densément peuplé, trop exigu, et les possibilités financières trop restreintes, pour permettre de la construction aussi dispersée et coûteuse, un tel éparpillement sur le territoire des municipalités.

Mais si nous sommes riches au Canada, riches en terrain, riches socialement et riches individuellement, malheureusement il y a une certaine classe de notre société qui n'a jamais pu, jusqu'à présent, espérer *devenir* propriétaire de sa maison, pour la bonne raison qu'on ne lui a pas laissé d'autre alternative que celle de *rester* locataire toute sa vie.

En effet, nous n'avons pas jusqu'ici sérieusement pensé d'utiliser un moyen terme, une solution médiane, qui se concrétise de plus en plus en Europe, celle de la co-propriété, c'est-à-dire cette faculté ou opportunité de pouvoir devenir propriétaire *de son logement* dans une maison d'appartements ou multifamiliale. A nous donc de nous mettre à la tâche et d'étudier cette possibilité, ce moyen particulier d'accès à la propriété.

A cause de la crise d'avant-guerre de 1929 à 1939, de la guerre 1939-1945 avec ses restrictions sur la construction d'habitations de tous genres et des bombardements et destructions d'innombrables maisons et autres édifices, les villes d'Europe ont été obligées de rattraper le temps perdu après, je le répète, dix années d'arrêt à cause de la crise, et six autres années d'arrêt par la guerre elle-même, ses restrictions et ses bombardements; cela représentait donc en tout seize années de retard avant de commencer à parer à une pénurie aiguë d'habitations; on peut dire 20 ans en comptant 4 années de démarrage. Vous pouvez alors juger de l'ampleur du problème.

À gauche, mail "Stadhuis plein" en direction "Est"
intersectant le mail Nord-Sud "Lijnbaan".

Nouveaux Concepts d'Habitation

De toutes les villes que j'ai déjà visitées en 1960, c'est en Hollande que l'on trouve le plus d'habitations à loyer modéré, que l'on constate les meilleures réalisations tant au point de vue individuel, collectif et humain en général, qu'au point de vue de l'aménagement et de la disposition des bâtiments sur le terrain, de façon à permettre de toutes manières le contact social entre les individus et les familles de différentes classes de la société, que ces individus et familles logent dans des maisons plus petites à 1, 2 ou 3 étages, ou dans des maisons plus grandes à 4, 6, 8, 10 ou 15 étages.

C'est également et surtout en Hollande que dans les développements d'habitation organisés et encouragés par le gouvernement ou les coopératives, on a le plus cherché à assurer ce "Kontakt" social, afin de mieux répondre au double besoin qu'il y a chez l'homme d'individualisme en même temps que de collectivisme; et cela, jusqu'au point de ne pas ériger de clôtures plus élevées que 3 pieds, niveau normal de l'oeil au-dessus du sol quand nous sommes assis, de manière à permettre aux gens de voir au delà des limites de leur patelin, de dépasser ou d'agrandir l'horizon de leur habitat, de sentir davantage qu'ils sont un rouage de la communauté dans la communauté, et non pas une simple roue détachée, isolée de la machine, et abandonnée au milieu d'un vaste champ. En outre, ces clôtures doivent être des haies de verdure et non des enclos de bois ou de métal, afin que l'habitation soit intégrée le mieux possible dans la nature elle-même, tout comme si elle en faisait partie.

Rotterdam

Le bombardement de mai 1940 et les incendies qui en ont résulté ont anéanti le centre-ville tout entier et une grande partie de l'est, soit en tout 642 acres. De son côté, la région du port a particulièrement souffert de destruction considérable vers la fin de 1944 par l'occupant allemand avant qu'il ne se retire de la ville. Les quais destinés aux navires de mer ont été dynamités sur une longueur de 5 milles, soit plus d'un tiers de la longueur totale, et 40 p. 100 des installations portuaires ont été complètement détruites de cette façon.

Comme le port avait toujours été la principale ressource de Rotterdam, c'est lui que la municipalité a décidé de réparer tout d'abord et le plus vite possible; voilà pourquoi, dès décembre 1949, les travaux de réparation étaient achevés. On en profita pour moderniser la construction des quais et pour regrouper plus efficacement les terrains situés dans la région du port.

Le port de Rotterdam est un port municipal; il est le plus grand de toute l'Europe et s'appelle "Europoort". Il est le deuxième plus grand port du monde, venant tout de suite après celui de New York.

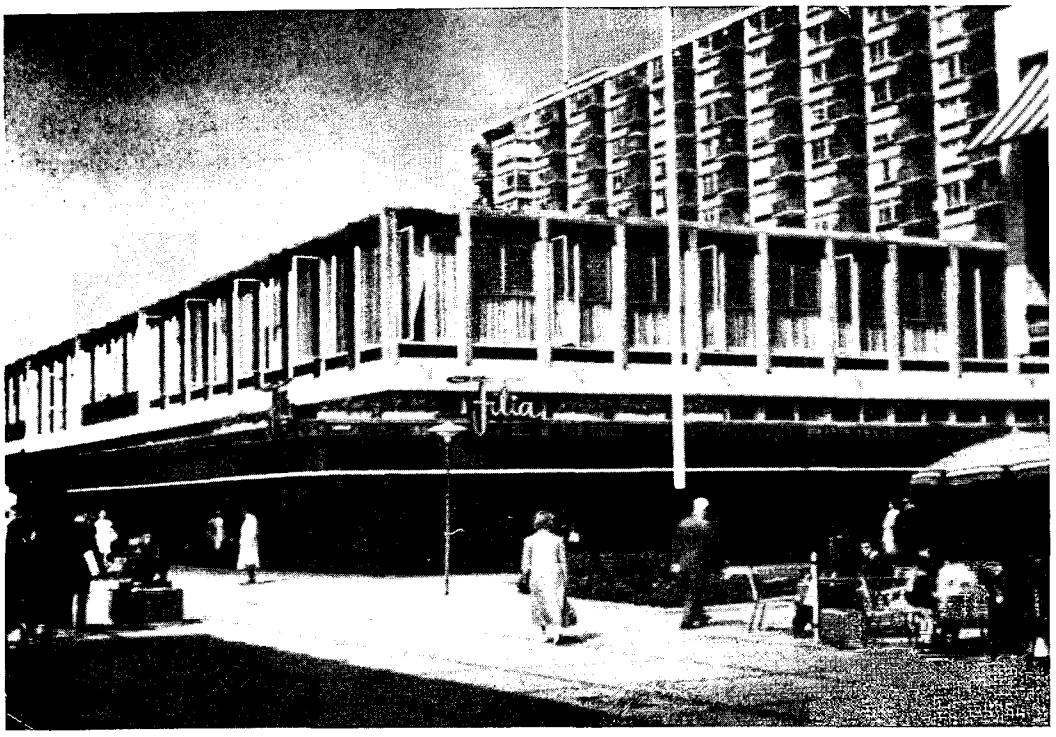
Dès le lendemain du bombardement, on organisa dans le centre dévasté de la ville le déblaiement des décombres, des ruines et des vieilles fondations. Quatre jours plus tard, on commença l'étude d'un projet de reconstruction du centre, et au bout de six mois on présenta le premier plan officiel de la ville nouvelle. Nous étions alors en décembre 1941.

Avant de reconstruire le nouveau centre, il fallut exécuter un vaste programme d'expropriations, à la fois des immeubles dévastés et du terrain, puis on en profita pour exproprier à leur périphérie 1,500 autres immeubles restés intacts, y compris le terrain. De cette manière 12,000 immeubles sur 415 acres de terrain, soit tout le centre-ville, furent ajoutés au patrimoine de la municipalité. En outre, celle-ci expropria hors de l'agglomération, 1,550 acres de terrain en vue d'y créer des quartiers résidentiels et des régions industrielles. Enfin, en 1941, quelques communes voisines furent ajoutées au territoire même de Rotterdam. Les propriétaires des immeubles dévastés, dont le terrain avait été en outre exproprié, eurent le droit de recevoir de l'Etat non pas une indemnité, mais un autre terrain—avec obligation d'y construire un immeuble—cela afin d'empêcher toute spéculation sur les terrains, et de forcer la reconstruction de la ville.

Quant aux immeubles dévastés mais non expropriés, l'Etat n'accordait des dommages de guerre qu'après que les propriétaires avaient dépensé un montant égal pour leur reconstruction.

Boulevard Coolsingel: la Banque de Rotterdam, avec ilôts de commerce sur le large trottoir.

Boulevard Coolsingel: stationnement dans le retrait du trottoir
à gauche — magasin à rayons De B'jenkorf
à droite — Hôtel de ville avec tour centrale



Intersection des mails Stadhuis plein & Lijnbaan Zonage mixte:
Magasins au 1er plan, habitations en retrait

Pendant la guerre, on construisit des routes, des ponts, et on creusa des canaux. Dans le centre et dans les quartiers extérieurs on édifia, pendant les années 1940 et 1941, 392 boutiques temporaires, 5,521 habitations permanentes, et environ 1,700 habitations temporaires.

Au cours de juillet 1942, l'autorité fit arrêter et suspendre tous les travaux de reconstruction, en vue d'élaborer de nouveaux plans de reconstruction visant à remodeler la ville entièrement. Un plan de base fut donc préparé et adopté par le Conseil municipal en mai 1946; peu de temps après, il était approuvé par le gouvernement central. Ce plan donnait à la nouvelle cité le caractère d'un centre administratif, commercial et culturel. L'industrie n'y fut pas prévue, mais on lui réserva des terrains périphériques. Dans le centre, où en 1940 furent détruits environ 25,000 logements, leur nombre fut limité à environ 10,000. Par conséquent, les autres nouveaux logements seraient placés à l'extérieur de Rotterdam, dans des quartiers résidentiels de banlieue. Le 1er janvier 1961, on avait construit presque 60,000 logements depuis le bombardement, exception faite des habitations temporaires. Quant au nouveau centre, on voulut en faire "un composé spacieux et aéré de bâtiments soigneusement groupés, conçus pour une ville vouée au commerce et à l'industrie."

L'espace et la fraîcheur caractérisant le nouveau centre ont été obtenus en prévoyant surtout de plus larges artères que celles qui existaient dans l'ancienne cité. Une plus grande partie des terrains disponibles fut également réservée à des terrains de stationnement, à des cours intérieures et autres endroits non engorgés par la circulation. Ainsi, la superficie non bâtie fut augmentée en passant de 44.5 à 69.4 p. 100, et la superficie réservée à la construction de bâtiments fut diminuée de 55.5 à 30.6 p. 100.

Grâce à cette utilisation plus rationnelle du sol, et à une ordonnance plus spacieuse permettant la construction de bâtiments plus élevés, le volume total des bâtiments est resté à peu près égal à celui de l'ancien centre. L'aspect de la ville fut amélioré davantage en pratiquant un chemin en bordure de la Meuse, avec vue sur cette dernière, symbole de l'étroite collaboration entre le fleuve et la ville.

Bien que l'ordonnance plus spacieuse ne soit pas due uniquement aux exigences de la circulation

moderne et ultra-rapide, celles-ci ont tout de même contribué à l'agrandissement du centre. En effet, les trois principaux tracés nord-sud ont été complétés de trois autres voies de communication dans le sens est-ouest. Le plan prévoit aussi un ensemble de rues commerciales relativement étroites et interdites à la grande circulation, ainsi que des rues commerciales ouvertes à la circulation ordinaire, puis des rues de desserte passant à l'arrière des bâtiments où s'opère l'approvisionnement des magasins. Le plan prévoit en outre un grand nombre de terrains de stationnement de dimensions restreintes, sans compter les bandes de stationnement qui ont été réservées aux automobilistes le long des routes plus larges.

Afin d'éviter de singuliers contrastes entre les bâtiments, le plan de base tend à grouper ensemble ceux qui ont une fonction spécifique. Les principaux édifices bancaires nouveaux se trouvent tous à proximité de la Bourse. Le "Théâtre de Rotterdam", construit presque entièrement de matériaux provenant des décombres de la cité dévastée, est encore plus ou moins isolé, mais on a projeté une salle de concert à proximité du théâtre, et ces deux bâtiments vont bientôt faire partie d'un centre culturel. Les deux grandes gares ont été réunies dans la "Gare centrale", déjà terminée. Nombre de boutiques ont été groupées, elles aussi, dans les ravissants centres commerciaux créés, à l'est et à l'ouest du Boulevard Coolsingel, le plus grand boulevard de Rotterdam. Des rues commerciales relient ces centres aux autres quartiers.

Les bâtiments collectifs constituent un type spécial qui était destiné au début à héberger les entreprises sinistrées. Un certain nombre d'entreprises plus ou moins analogues se sont donc réunies dans un seul bâtiment commun, avec distribution centrale de la force motrice, du chauffage, etc. Dès 1941, on commença la construction d'un *Bâtiment de l'Artisanat*, qui comprend cinq immeubles d'une superficie utilisable de 81,000 pieds carrés. Devant le succès de ce bâtiment commun, on a entrepris en 1947 et achevé en 1951 la construction d'un *Bâtiment de l'Industrie,* d'une superficie utilisable de 191,000 pieds carrés.

Le plus grand bâtiment du genre collectif est le gigantesque "*Groothandelsgebouw*", immeuble collectif réservé au commerce de gros, où sont établis plus de 200 commerçants de gros. Il a une hauteur de 125 pieds et une superficie utilisable de 1,100,000 pieds carrés, ce qui équivaut à une implantation au sol de 300 pieds sur 400 pieds. Des routes pour automobiles passent à travers la cave et le rez-de-chaussée; les voitures peuvent même se rendre au premier étage.

Ce bâtiment contient, outre les bureaux, magasins et salles d'exposition des grossistes, un grand nombre de boutiques, un café - restaurant, une cafétéria (restaurant à prix réduit), six jeux de quilles, des salles de réunion, des salles d'exposition, des réfectoires, un bureau de poste, une agence de voyages, une banque, des kiosques et un salon de coiffure. Quatre cents voitures peuvent stationner dans la cave, où se trouve aussi un atelier de réparation pour automobiles. A l'heure actuelle, plus de 5,000 personnes ont trouvé un emploi dans ce "Palais du Commerce de Gros".

Et voilà pour la ville de Rotterdam. Il ne faut pas non plus oublier sa banlieue "*PENDRECHT*" dont le plan fut préparé par le service municipal d'Urbanisme, et la banlieue voisine "*ZAUDWEG*" conçue par un groupe d'architectes de la pratique privée. ✦✦✦

Monsieur Roméo Mondello, Ing. P., est actuellement le directeur du Service des permis et inspections de la Cité de Montréal. Il est diplômé en Sciences appliquées et Génie civil (1930); Sciences sociales, économiques et politiques (1934); Journalisme (1935); B.A. et licence en philosophie (1943); Maître ès sciences en Génie sanitaire, Harvard (1948); Bachelier en droit (1951). Il fut admis au Barreau de Montréal en 1956. L'année suivante, après sa nomination comme membre de la Société Royale d'Hygiène en Angleterre, il fut délégué en Tunisie par l'ONU en qualité d'expert de l'Organisation Mondiale de la Santé.

by Joan Murie,
Information Division, Central Mortgage and Housing Corporation.

Manitoba's Golden Boy, a 13½ foot figure crowning the dome of the Provincial Legislative Buildings, is cast in full stride—for this western province is not content to stand still. Even more significantly, the Golden Boy is faced towards the north where his province's future lies with its wealth of farming, mineral resources, fish, forests, furs and water-power. If this gleaming statue were endowed with human senses—particularly ultra long-sightedness—he'd be permitted a broad grin of self-satisfaction at the exciting scene unfolding 270 miles to the north where Canada's largest current hydro-electric construction program is underway.

Taming the Rapid River

At Grand Rapids on the historic Saskatchewan River, Manitoba Hydro is building a $140 million hydro electric development which will increase the hydro output by one-third and add a 3,000 square mile man-made lake to the map of the Province. The site, some six miles from where the river empties into Lake Winnipeg, is a turbulent stretch of water extending over a distance of three miles with a difference in elevation of 75 feet between the upper and lower reaches of the rapids. It will be one of the first northern rivers harnessed to transmit power to the heavily industrialized southern section of Manitoba with an estimated potential of 450,000 horsepower or 335,000 kilowatts.

The Saskatchewan River, fourth largest in Canada, was discovered in 1741 by LaVerendrye and his sons and was then known to the Cree Indians as "Kisikatchewin" — meaning "rapid river". The river rises in the eastern ranges of the Rockies and flows a distance of 1,205 miles to Lake Winnipeg and although only a short part of it lies within the boundaries of Manitoba, it is an important section comprised of a series of small lakes connected by the main river flow.

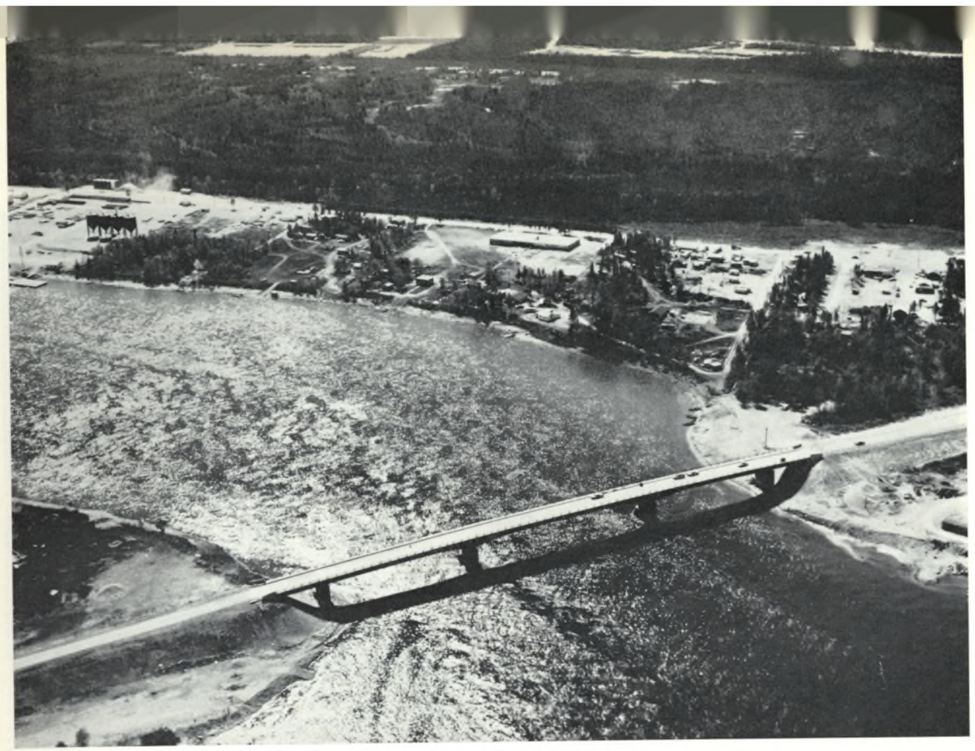
While the chalky white limestone bluffs that form the shoreline provide a striking contrast against dense green forests and foreground of swirling rapids, they are presenting engineers with awesome problems. As the last of the glacial ice caps which once covered central Canada receded to the north, it left in its wake vast expanses of inundated territory. Into these waters some 10,000 to 50,000 years ago came snails and other shelled aquatic creatures to complete their life cycles and fall by the billions to the beds of the primeval seas, forming a deep sedimentary mass of shell fragments and ooze. That the process was not continuous is evident from the distinct layers in the limestone. Each successive bed, usually separated by a layer of shaly material, represents a period of uninterrupted decomposition and the shale a break in the process. Probably the chief agency in consolidating the mass into rock was the growth of cementing crystals of calcite or dolomite and pressure from the movement of the earth may also have contributed in compressing the layers.

The Water Power Branch of the Dominion Government surveyed Grand Rapids as a possible source of hydro-electric power back in 1912, but problems relating to construction, transportation and long distance transmission made the project unattractive at that time. However, technological advances made between 1912 and 1953 minimized many of the earlier problems and influenced Manitoba Hydro to conduct further field investigation work in the summer of 1953. On the basis of data provided and subsequent comprehensive studies, it was determined that the site could be developed to 335,000 kilowatts by construction of a single power house and spillway rather than by two power houses and spillways as proposed in the 1912 report.

From information obtained during investigation of the site it became apparent that to contain a sufficient depth and volume of water in the forebay, it would be necessary to undertake a considerable amount of grouting. The thin fluid mortar will be used for filling intervening spaces, chinks or crevices in the horizontal and vertical fractures of the limestone at Grand Rapids. These separations in the stone create a major problem when an immense volume of water is to be retained within a reservoir having a perimeter consisting in part of dykes erected on limestone foundations. If the underground foundation is not effectively sealed, water will escape from the storage area.

Through 1½ inch holes drilled on five foot centres along the dyke line, grout is forced under pressure into fractures, separations and solution channels in a series of complex operations. In this way, 16 miles of dykes and intervening areas will form an underground curtain type of seal. Of the 200,000 tons of cement required on the Grand Rapids project, slightly more than one-half will be used in the grouting program.

During a visit to the site by the writer in June, the above-ground activity was reminiscent of scenes along the St. Lawrence Seaway in 1957 and 1958. One of the most interesting and challenging aspects of the development is the creation of the forebay

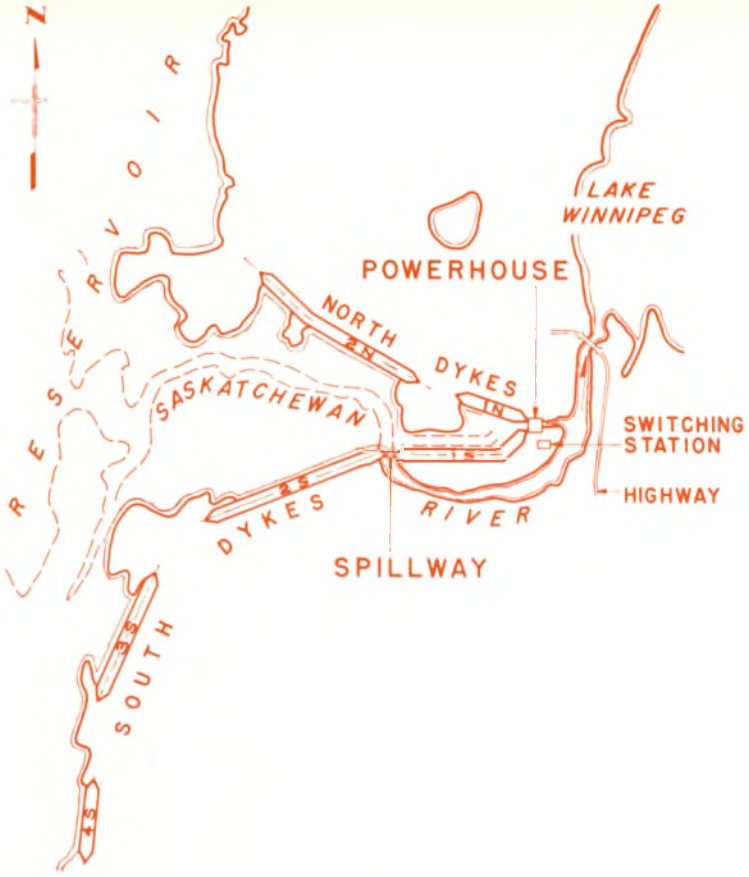


A new bridge spanning the mouth of the Saskatchewan River marks the end of the 112-mile highway from Gypsumville. The townsite can be seen along the river bank at right.

reservoir capable of containing 305 billion cubic feet of water. Dykes are being erected to impound the water in areas of low elevation, an operation which will ultimately consume some 7,500,000 cubic yards of earth and 1,800,000 cubic yards of rock. An additional 500,000 yards of rock rip rap (a mixture of gravel and small rocks) will cover the dyke exteriors. Excavations in the spillway, intake and power house areas will entail the removal of 1,800,000 cubic yards of unclassified material and 2,200,000 cubic yards of rock. The development program calls for the first unit to be in service in the fall of 1964.

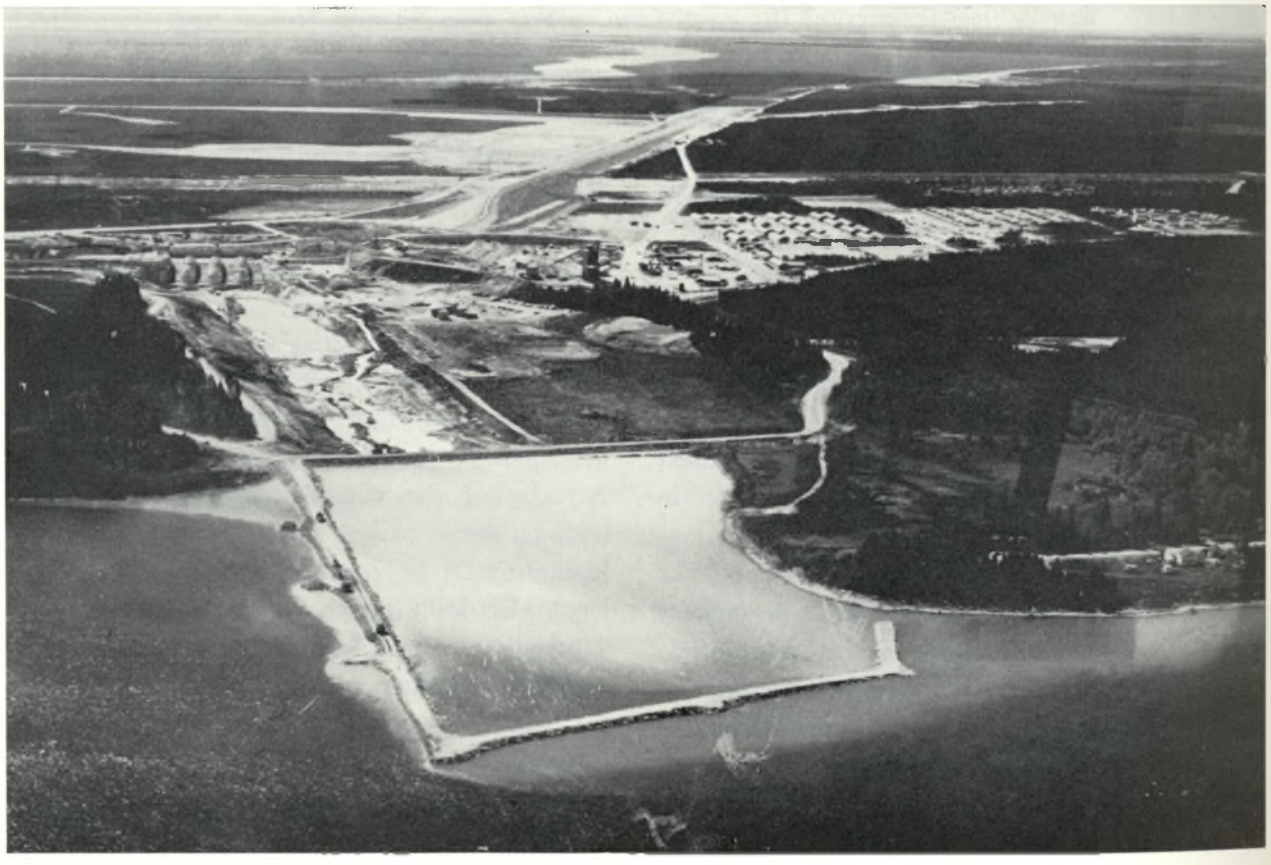
The intake, a reinforced concrete structure, will abut the eastern section of the dyke approximately 138 feet upstream from the power house. Nine control-head gates, three for each unit, will be installed through which water will flow downwards inside three 200 - foot long, 29 - foot diameter penstocks to the turbines. Three 110,000 kilowatt generators rotated by three 150,000 horsepower adjustable blade turbines will be installed in the power house. The turbines, the largest of this type used to date on the North American continent, are being manufactured in Canada. Minimum provisions have been made in the power house design to permit the later installation of a fourth unit when power demands indicate the need.

The spillway, forming an integral part of the southern dyke system, will be constructed across the present channel of the Saskatchewan River above the rapids. It provides the means of regulating the elevation of the water confined in the forebay reservoir during periods of high river flow when the level of the forebay must be lowered. The four steel gates, electrically operated from the power house, will permit water to be discharged at volumes up to 140,000 cubic feet per second. Water spilled through the gates will flow down the existing river channel to merge with water flowing from the power house tailrace or outflow to Lake Winnipeg. The gates will be provided with interior heating which, in



This diagram shows the general arrangement of the Grand Rapids Power Development.

Below, an overall view of the construction site showing the dyke, penstock cut, tailrace area and coffer dam in the foreground. At upper right is the townsite.



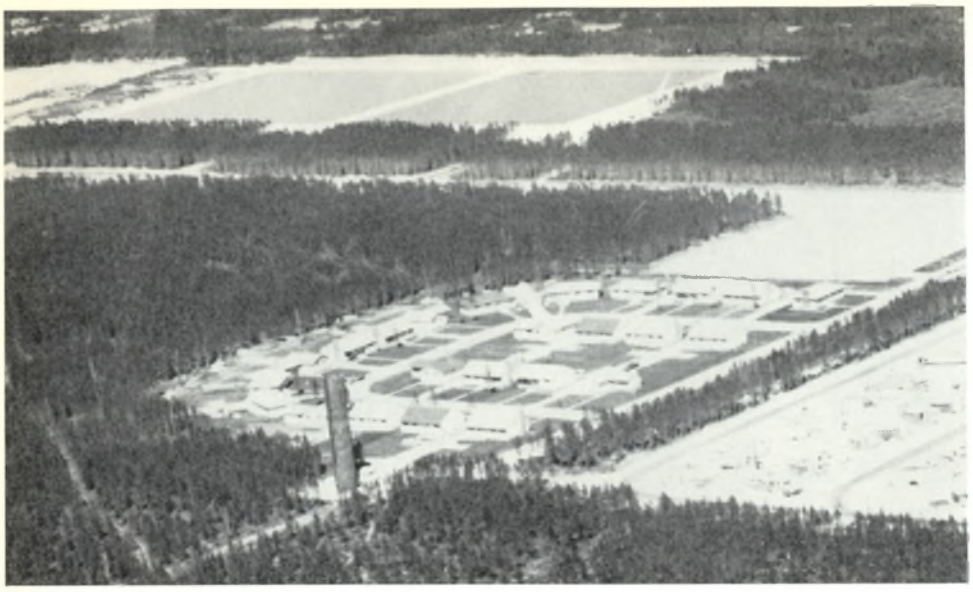
Men and machinery are hewing through layers of limestone to produce the penstock cut.

conjunction with heating in the piers, will overcome icing conditions during cold weather.

By judicious scheduling, it was found the construction period at Grand Rapids could be shortened by one year providing equipment and material could be made available at the site when needed. By undertaking to meet this requirement, it was possible to delay the start of construction for one year and thereby save a year's interest on the $140 million required for the project. With loads exceeding 250,000 tons involved, transportation constitutes a key factor in maintaining rigid construction schedules. Manitoba Hydro assumed one third of the cost of constructing the 112-mile highway between Grand Rapids and Gypsumville. The $2,000,000 gravel highway, an engineering feat in itself, was built at the phenomenal rate of a mile per day through muskeg and wilderness. Wildlife abounds along the road and no less than 12 bears were sighted on the round trip from Gypsumville.

Marine transport by Lake Winnipeg from Selkirk is used extensively in the summer with some 45,000 tons of material shipped by barge for the project. In winter, when the highways are frozen and load restrictions removed, materials and equipment are brought in by truck. Through the joint use of both marine and highway transportation a continuous flow of material to Grand Rapids is assured.

While the majority of the 1,400 construction workers engaged at the project are housed in temporary wooden dormitories or trailers, their supervisors are occupying 24 permanent houses designed for the Manitoba Hydro employees who will eventually operate the power development. This crescent of pleasantly contrasting bungalows—valued at $18,000-$19,000 per unit exclusive of land—could well qualify for a Canadian Housing Design Council grouping award. A paved street, trees, proper sewage disposal facilities and even front lawns—the sod was imported by barge from Selkirk



Left, a crescent of modern bungalows appear as if by magic in this dense wilderness setting. They will provide permanent homes for Manitoba Hydro employees. In the background are primary and secondary stage sewage lagoons.

It could be a housing development in any Canadian suburb but in this case civilization is 270 miles south — in Winnipeg. Sod for the front lawns of these $18,000 houses was transported by barge up Lake Winnipeg from Selkirk, Manitoba.

PHOTOS BY MANITOBA HYDRO

—have not been overlooked. A school, playground, hospital, churches and embryo shopping centre are located nearby.

Manitoba Hydro has recognized its obligation to ensure that the permanent residents and wild life of the development would not suffer unduly through the disruption caused by a project of this magnitude. It has entered into agreements with departments and agencies of the Provincial and Federal Governments whereby Manitoba Hydro pays the major share of providing any service, study or rehabilitation costs involved in offsetting any adverse conditions created.

One unexpected dividend of the project will be new housing for 70 Indian families who will be homeless when the waters of the Saskatchewan flood their reservation. These people have been given a choice of 12 sites for their new reservation and will be provided with $6,000 houses. Meanwhile, they and the Métis of the area have abandoned their customary boats and fishing gear and have joined their paleface brothers in the mammoth task of harnessing the "rapid river". ✦✦✦

CONSEIL CANADIEN
DES RECHERCHES URBAINES ET RÉGIONALES

"D'encourager et favoriser des recherches urbaines et régionales là où elles pourraient être le plus efficaces", telle est la déclaration générale officielle des buts du CCRUR. Le Conseil canadien de recherches urbaines et régionales fut officiellement établi au mois d'avril 1962, par 41 personnes qui détiennent des postes supérieurs dans le gouvernement fédéral, les gouvernements provinciaux et municipaux, les universités, les professions libérales et l'entreprise privée.

Le but du Conseil est d'intensifier les efforts faits au Canada dans ce domaine au moyen d'une action concertée pour définir des objectifs communs de recherche; de recueillir des fonds pour effectuer ces recherches; d'établir un centre efficace de compilation et de distribution des données et des résultats obtenus au moyen des recherches; et—en groupant aux fins de consultation, un grand nombre d'étudiants canadiens, de spécialistes de l'administration et des associations professionnelles—de fournir aux institutions existantes et à des étudiants particuliers de tout le Canada une meilleure occasion de se consacrer à des recherches intenses sur des problèmes urbains suscités par l'aménagement communautaire.

Financement

Une aide financière accordée au Conseil par le gouvernement fédéral et la Fondation Ford contribuera immensément à encourager de telles études.

On prévoit en effet que l'octroi de $78,000 fourni par le gouvernement fédéral à même des fonds prévus par les dispositions de la Loi nationale sur l'habitation, serviront à payer les dépenses du Conseil pendant une période de 15 mois, se terminant en décembre 1963. L'octroi de la Fondation Ford, s'élevant à 500,000 dollars américains, sera employé par le Conseil, au cours d'une période de cinq ans, pour aider à des travaux de recherches en vue de résoudre des problèmes urbains et régionaux dans tout le Canada. On prévoit que d'autres deniers provenant de dons de diverses sources publiques et privées s'ajouteront graduellement à ces octrois.

Premier conseil d'administration

Le premier conseil d'administration élu par le Conseil au mois de mars, se compose comme suit:

Président:

M. Peter Dobush, architecte de Montréal, ancien président du Comité d'aménagement des milieux résidentiels de l'Institut royal d'architecture.

Vice-président:

M. Eric Beecroft, directeur du bureau d'Ottawa, Fédération canadienne des maires et des municipalités.

Autres membres:

M. H.-S.-M. Carver, président du Comité consultatif, Société centrale d'hypothèques et de logement.

M. J.-S. Hodgson, secrétaire adjoint du Conseil privé du Canada.

M. James-H. Lowther, commissaire des Finances, cité d'Ottawa.

M. George-S. Mooney, directeur exécutif, Fédération canadienne des maires et des municipalités.

M. Eric-W. Thrift, directeur général, Commission de la Capitale nationale.

Buts du Conseil

Les buts du Conseil sont les suivants:

(a) d'encourager et faciliter la formation de personnes qui s'occupent déjà de recherches et d'affaires urbaines;

(b) de favoriser une meilleure compréhension des problèmes et des besoins urbains et régionaux, de la part des administrateurs, des groupes de professionnels et du public en général;

(c) de faciliter et appuyer tous les efforts qui sont faits dans tout le Canada en vue de recueillir, analyser, coordonner et distribuer les connaissances disponibles, et d'entreprendre de tels efforts directement lorsqu'il sera jugé nécessaire de ce faire pour combler les lacunes dans les recherches ou pour compléter et appuyer le travail déjà entrepris par des organismes existants;

(d) de fournir des moyens efficaces et réguliers grâce auxquels des groupements locaux, régionaux, provinciaux et nationaux ainsi que des spécialistes particuliers pourront étudier ensemble tous les buts susmentionnés et les moyens de les atteindre;

(e) d'aider tous ces groupes et particuliers à trouver l'aide nécessaire pour l'exécution de leur programme de recherches.

Organisation

En préparant sa charte, le Comité de fondation de 41 membres s'est engagé à former un Conseil de 60 membres. Lors d'une réunion tenue récemment, le Comité a décidé de plus de prendre toutes les mesures nécessaires en vue de former définitivement le nouveau Conseil de 60 membres vers la fin d'octobre 1962.

Parmi ces 60 membres, vingt seront nommés par les gouvernements, comme suit: (a) au plus cinq personnes doivent être employées au service du gouvernement fédéral; (b) un membre de chaque gouvernement provincial, à savoir le sous-ministre chargé de l'administration des affaires urbaines et régionales (ou un représentant désigné par lui); (c) au plus cinq personnes employées dans les services des gouvernement municipaux ou par des associations municipales, qui doivent être nommées par la Fédération canadienne des maires et des municipalités.

Les 40 autres membres seront élus par le Conseil pour des mandats de trois ans; cependant, en ce qui concerne les premiers membres élus, 14 pourront l'être pour un an, 13 pour deux ans et les 13 autres pour trois ans.

Au moins dix des membres élus doivent faire partie d'une faculté universitaire, et au moins cinq doivent être des personnes à l'emploi des services d'un gouvernement municipal ou d'une association municipale. Le reste des membres élus doivent être choisis parmi les représentants des professions libérales, de l'entreprise privée, des groupes de citoyens et des organismes du gouvernement intéressés à la poursuite et à la mise en oeuvre de recherches sur les problèmes urbains et régionaux.

Le bureau du Conseil est situé présentement à 56, rue Sparks, Ottawa 4. Des annonces relatives à des situations importantes à offrir sont présentement publiées dans un certain nombre de revues et de journaux.

Fonction consultative et coordonnatrice

Dans toutes les délibérations qui ont été tenues jusqu'à ce jour, le Conseil a fait ressortir son caractère consultatif et coordonnateur, son désir de faire fonction de "centre canadien de compilation, de distribution et de mise en oeuvre d'idées sur les recherches urbaines et régionales". Ses porte-parole ont déclaré "qu'il ne doublera pas le travail des universités ni celui des autres institutions existantes mais qu'il consolidera au contraire le travail de ces mêmes institutions publiques et privées".

Le défi

Dans le préambule de la déclaration des buts du Conseil, les membres fondateurs ont fait les commentaires suivants, il y a déjà plusieurs mois:

> Les cités, les villes et les régions urbaines du Canada ont à faire face à des problèmes pressants causés par la rapidité de leur développement et les changements imprévisibles qui se produisent. Une proportion toujours croissante de la population habitera les centres urbains où le niveau de vie est élevé. Dans la construction des cités, les décisions hasardeuses doivent être prises de manière que les besoins envisagés pour l'avenir n'épuisent pas les ressources de la génération actuelle. Des placements considérables de fonds privés ou publics devront être faits; la sécurité de ces placements dépend de la résolution de plusieurs aléas qui se présentent dans l'évolution rapide des régions urbaines au Canada.
>
> Actuellement, les multiples problèmes complexes créés par cette situation sont envisagés par des associations professionnelles, éducatives et administratives, qui n'ont pas suffisamment l'occasion de bénéficier de leur expérience réciproque. L'échange mutuel entre ces organismes particulièrement intéressés aux problèmes des voisinages urbains est entravé par une compilation insuffisante d'expériences consignées et classées et par l'absence d'un organisme pour favoriser un échange continuel d'idées. Les associations professionnelles, éducatives et administratives intéressées aux affaires urbaines bénéficieraient des connaissances et de l'expérience acquises et rendues disponibles par l'intermédiaire d'un organisme central qui favoriserait l'échange d'idées entre elles, avec les organismes du gouvernement et tous les autres groupes ou associations directement ou indirectement intéressés.

Historique

L'idée de former une association à caractère national en vue d'aider et de coordonner les recherches sur les problèmes urbains a pris naissance dans un certain nombre de propositions faites par la Fédération canadienne des maires et des municipalités et par l'Institut royal d'architecture du Canada. Ces deux organismes nationaux ont demandé à la Société centrale d'hypothèques et de logement, l'organisme du logement du gouvernement canadien, de prendre l'initiative de convoquer des réunions en vue d'étudier leurs propositions. La première séance d'études fut tenue le 2 février 1961, au bureau central de la SCHL, et à cette occasion, il fut décidé de demander à un certain nombre de sources diverses de faire des recommandations sur la portée d'un programme de recherches urbaines et sur le genre d'association qui pourrait être créée. Quatorze personnes de différentes parties du pays furent alors invitées à grouper de petits comités d'étude et à soumettre des recommandations; ces délibérations étaient tenues par des personnes appartenant au milieu universitaire, à l'administration municipale ainsi qu'à des groupes intéressés à l'urbanisme. Les recommandations avaient toutes été reçues au mois de juin 1961 et un petit comité de travail (représentant la SCHL, la FCMM et l'IRAC) prépara un document qui englobait le consensus des idées exprimées. Une réunion fut alors convoquée pour le 20 octobre 1961 en vue d'étudier cette esquisse préliminaire d'un projet comprenant la création d'une association et l'établissement d'un programme de recherches.

Environ 40 personnes furent invitées à prendre part à la réunion du 20 octobre, au bureau central de la SCHL et presque toutes s'y rendirent. Il s'agissait d'un groupe trié sur le volet, qui comprenait le fonctionnaire supérieur chargé de l'administration des affaires municipales de chaque province (dans la plupart des cas, le sous-ministre), des dirigeants municipaux, des professeurs d'université, des personnes représentant les professions de l'architecture, du génie et de l'urbanisme. A cette réunion, le document exposant le projet fut étudié en détail et on y apporta quelques modifications mineures. La réunion se termina après qu'on eut pris les décisions suivantes—à savoir

(a) que les personnes invitées à y assister constitueraient le Comité de fondation du Conseil canadien de recherches urbaines et régionales;

(b) qu'un congrès de fondation serait tenu au début de l'année 1962 afin de décider de la création du Conseil;

(c) que messieurs Peter Dobush, Eric Beecroft et Humphrey Carver formeraient un Comité d'action chargé de s'occuper des préparatifs nécessaires à la tenue du congrès et à la création du Conseil.

Le congrès de fondation fut tenu à Ottawa, du 15 au 17 mars 1962; environ 200 délégués y prirent part, et de ce nombre environ 20 p. 100 étaient des personnes appartenant au milieu universitaire; 15 p. 100 étaient des urbanistes; 14 p. 100 représentaient des organismes du gouvernement fédéral (SCHL, Affaires du Nord, BFS, Commerce, Mines et Relevés techniques, etc.); 12 p. 100 représentaient l'entreprise privée; 8 p. 100 appartenaient à des groupes de professions libérales; et le reste, soit 16 p. 100, appartenaient à un certain nombre de groupes spéciaux et à des sociétés de citoyens.

Les délibérations du congrès donnèrent lieu à de grandes différences d'opinion quant à la forme définitive que le Conseil devrait prendre; toutefois, il y eut accord complet quant à la nécessité d'un effort national concerté dans ce sens et à la création d'un organisme central de compilation et de distribution des données relatives aux travaux de recherches entrepris dans ce domaine au Canada.

En conciliant les opinions contraires et en prenant les dernières dispositions en vue d'obtenir l'incorporation du Conseil, le conseil d'administration et le Conseil ont obtenu l'aide précieuse du Comité consultatif intérimaire, dont monsieur Gavin Henderson, directeur exécutif du "Conservation Council of Ontario", était le président.

Les lettres patentes émises par le Secrétaire d'Etat étaient datées du 19 avril 1962 et les derniers détails relatifs à la constitution du Conseil furent réglés lors d'une réunion du Conseil tenue le 17 mai.

Des pourparlers avec le gouvernement et avec la Fondation Ford au sujet du financement du travail du Conseil se sont poursuivis au cours des deux dernières années et furent menés à bonne fin dès la création officielle du Conseil.

"l'objectif pratique ultime"

En résumant le but du Conseil projeté au mois d'octobre 1961, les membres fondateurs ont approuvé la déclaration suivante:

"Le Conseil aurait la responsabilité de prendre toutes les mesures nécessaires, en collaboration avec les institutions existantes de recherches et d'éducation, les gouvernements et les groupes professionnels, en vue d'établir:

(a) la collaboration inter-disciplinaire qui est essentielle dans les entreprises de recherches et d'éducation; et

(b) les communications entre chercheurs, professeurs, administrateurs et professionnels, qui sont essentielles pour assurer des études fructueuses et améliorer les connaissances des personnes qui sont administrativement responsables de la direction de l'aménagement urbain et régional.

Le Conseil doit se consacrer à examiner les façons dont les groupes qui le constituent peuvent améliorer la préparation des nombreuses professions en cause, à la construction communautaire; les façons dont les subventions aux fins de recherches et de formation pourraient être employées à cette fin; et les moyens à prendre, dans toutes les recherches et la formation en rapport avec le domaine de l'aménagement urbain et régional—que ce soit en rapport avec l'aménagement, les plans, le financement ou l'administration—pour atteindre avec le plus de succès possible, l'objectif pratique ultime de la construction communautaire.✦✦✦