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Canadian housing construction highest ever in 1973

According to the 1973 annual report of Central Mortgage and Housing Corporation, housing construction in Canada last year broke all records.

Housing starts reached a total of 268,529, an increase of 7 percent over the previous record of 250,000, established in 1972. This performance is well ahead of the annual rate of 245,000 starts which the Economic Council of Canada forecast would be required to meet the needs of Canadians. The greatest increase in starts was in single-family dwellings, although starts on multiple units also rose.

The bulk of these housing starts, or 240,000 dwelling units, was financed by the private sector. This included 75,000 units built under the National Housing Act (NHA). In addition, some 30,000 units were financed directly by the Corporation under NHA programs which provide low-cost loans and other assistance for low-income people in meeting their housing needs.

Aside from the high level of productivity, the year was notable also for

significant amendments to the National Housing Act that were enacted into law by Parliament, which created a range of new housing and community-improvement programs. In particular, the new programs gave people with low incomes a wider choice than ever about the kind of housing they would occupy and their form of tenure. Depending on their needs, preferences and financial resources, assistance was made available, through low-cost loans and grants, to help them buy their own homes, to rent accommodation at below-market costs, or to repair and rehabilitate their homes to acceptable standards of health and safety. Low-income people were also the principal beneficiaries of a new program that helps improve and conserve urban neighbourhoods which are in danger of decay or destruction.

The initial results have been most encouraging. From the time the new programs became available, until the end of 1973, the Corporation was able to commit over \$130 million in loans to



Photos courtesy Central Mortgage and Housing Corporation

Senior citizens' apartment, Oakville, Ontario, financed under the NHA.



This low-rent housing project in Vancouver, British Columbia, was con-

structed with the co-operation of the federal and provincial governments.

families who qualify under the Assisted Home-Ownership Program and more than \$160 million to entrepreneurs and non-profit and co-operative housing organizations who are prepared to build or acquire low-income housing.

The Neighbourhood Improvement Program and the related Residential Re-

habilitation Program require federal-provincial agreements before they can have effect. Following a recent cross-country tour by the Minister of State for Urban Affairs and CMHC officials to consult with the appropriate provincial officials, it was announced that four provinces — British Columbia,



National Housing Act-financed condominium complex, Halifax, N.S.

Alberta, Saskatchewan and Ontario — had signed NIP agreements and substantial progress towards agreement had been made with the other provinces.

In the closing months of the year considerable activity was generated in public land assembly and, by year's end, Corporation approvals for this purpose totalled more than \$185 million.

Housing prices, like prices of most other commodities and services in Canada and throughout the world, continued to rise in 1973, with the impact being felt most in the large rapidly growing urban areas. Insofar as it is within the power of the Corporation to affect prices, CMHC tried to restrain this escalation and to seek new ways of influencing housing costs. The most critical cost component is the price of serviced land and the innovative approach to public land assembly is directed to this aspect of the problem. At the same time the Corporation is active — and will be more active — in developing and demonstrating new housing forms, innovative kinds of land use, construction methods and materials, which are likely to produce more satisfactory housing at less cost.

Important advances were made during 1973 in developing a more co-ordinated approach to housing and community improvement by all levels of government. The need for a new and more effective

Canadian housing statistics for the year 1973

Single-detached starts in 1973 rose by 14 per cent and accounted for one-half of the total. This type of housing had represented about the same proportion of starts in 1966, but it subsequently fell each year until it was only 37 per cent in 1969 and 1970. Since then the single-detached share has risen every year.

Starts of row-housing and apartments also increased, but growth was not so rapid as in the case of single-detached units. A small decline occurred with semi-detached and duplex dwellings. Total multiple starts were 2 per cent greater than in the previous year.

New units were absorbed at a rapid rate, particularly in the case of home-ownership dwellings. At the end of 1973, there were 47 per cent fewer unoccupied houses and duplexes in metropolitan and major urban centres than there were one year earlier, despite a higher level of completions.

Approximately one-third were priced from \$25,000 to \$35,000. Home-ownership dwellings were also provided in the form of condominium-row and apartment units. Condominium tenure has now gained wide acceptance as an alternative to the traditional form of home-ownership tenure.

The average total cost of NHA single-detached houses for Canada was \$25,517 in 1973, 9 percent over the corresponding average in 1972 of \$23,475.

The average family income of NHA borrowers climbed to \$12,856 in 1973, an increase of almost 9 percent over that of the previous year. This compares to an estimated average income for all families of \$11,383 in 1973. The proportion of NHA borrowers drawn from the lower third income group fell to 25.0 per cent from 29.2 per cent in 1972.

Artificial pancreas – another Canadian breakthrough for diabetics

An artificial pancreas that provides far better control of blood-sugar levels in diabetes than can ever be achieved by pills or conventional methods of injecting insulin has been developed at the Hospital for Sick Children in Toronto, in collaboration with the Institute of Biomedical Engineering of the University of Toronto.

Specialists believe that it provides, for the first time, a chance to protect some diabetics from many of the disabling secondary effects of the disease, such as blindness, kidney failure and blood-circulatory problems in the extremities.

The new machine provides a continuous measure of the levels of blood-sugar, computes the dose of insulin needed to head off any tendency towards abnormally high levels and then injects the required amount of insulin.

When blood-sugar levels are low, instead, it injects dextrose directly into the bloodstream.

While the present model is about the size of an average television set, and too large to be readily portable, Dr. Michael Albisser, senior engineer in the team, says the size and weight might well be reduced by utilizing foreseeable developments in technology.

The machine, and tests conducted with it on both laboratory animals and humans, are described in two papers by members of the team in the current issue of the journal *Diabetes*. The first paper describes how diabetic dogs were successfully treated by the machine; the second records three cases in which human patients were treated, first by conventional subcutaneous injection of insulin and then automatically, using the new artificial pancreas.

Positive results

In all cases, a consistently beneficial level of blood-sugar was achieved when the machine was used. When insulin was injected in the usual way, instead, blood-sugar levels rose and fell according to a pattern that is well known and characteristic of current methods of treatment.

Many specialists in the field believe that it is these major fluctuations in blood-sugar level that lead to microvascular complications and later dis-

abilities, even when the gross immediate symptoms of the diabetes are controlled.

Clinical tests involved three patients, a 27-year-old student, weighing 160 lbs., who had suffered from diabetes for three years; a 20-year-old unemployed male, weight 160 lbs., who had been a recognized diabetic for eight years; and a 42-year-old merchant, weight 180 lbs., who had had diabetes since the age of four.

All were given conventional subcutaneous insulin on the first day and monitored throughout the day. On the second day, they were monitored and treated by the machine, and served identical meals.

The results showed that the combined effects of administering insulin to reduce abnormal sugar levels and giving dextrose to increase the levels when low, produced an unprecedented degree of control, so that patients were never in a situation that could be considered in any way unsatisfactory or abnormal. On the other hand, all three patients showed large excursions and persistently elevated levels of blood-sugar when treated with subcutaneous insulin in the normal manner.

It was interesting to note that the artificial pancreas was able to cope, not only with sugar loads resulting from meals and snacks, but also downward trends in sugar levels caused by such minor excitements as the visit of a fiancée or friend, the taking of blood from veins or some emotional situation in a television program.

Statement by discoverer of insulin

Commenting on the latest development, Dr. Charles Best, co-discoverer of insulin with Sir Frederick Banting in 1921, writes:

"Many experts feel that the complications of diabetes which are of such deep concern to us might be prevented if the liberation of insulin were completely physiological, i.e. normal. One is by the transplantation of islet tissue, which has great promise, but which I will not discuss here. The other is by the perfection of an artificial pancreas, and there are a number of laboratories throughout the world which are very active in this field. I believe, however, that Drs. Leibel, Albisser and Zing-

and their colleagues in Toronto are leaders in this vital research... I regard this development as extremely important and one which gives very great promise of helping diabetic patients, if the apparatus can be made more compact."

Dr. Leibel, senior physician in the team and an associate professor in the Banting and Best Department of Medical Research of the University of Toronto, notes that, although insulin was discovered more than 50 years ago, there has been no significant change in treatment since its adoption. The success of any individual treatment has usually been assessed retrospectively by urinalysis and is extremely coarse." He went on: "The clinician is handicapped because at present there is no practical way to administer insulin according to physiological demand."

Canada aids Red Cross in Asia, Sahel

Canada has contributed more than \$500,000 for Red Cross relief programs in Asia and Africa. A grant by the Canadian International Development Agency (CIDA) of \$250,000 will assist the League of Red Cross Societies with civilian resettlement programs in Bangladesh and Pakistan. The repatriation and resettlement program grew out of the bilateral agreement signed last year at New Delhi by India and Pakistan, and was facilitated by establishment of recognition between Pakistan and Bangladesh at the recent Islamic summit meeting in Lahore, Pakistan. A contribution of \$1 million in 1973 to the United Nations High Commissioner for Refugees has since been used to help nearly 330,000 civilians return home.

Canada has also provided the League of Red Cross Societies with \$250,000 for its work in Africa's Sahelian zone, where the famine in six countries is expected to be at least as bad in 1974 as it was last year. Estimates of food aid required were revised upward in February. An additional grant of \$58,750 to help Red Cross work in the Sahel and Ethiopia was announced early in April.

Migration of nomads across national borders to refugee centres has strained the resources of countries already trying to cope with starvation among

their own nationals. The Red Cross has stepped up its emergency efforts to aid refugees who have no legal right to food and medical care in the countries where they sought refuge, and is also working on refugee repatriation and rehabilitation. Canada provided roughly \$10 million in food aid, air transport and other goods and services for the Sahel in 1973, and in December announced a \$1.5-million contribution that is sending wheat to Ethiopia.

NRC awards

The National Research Council of Canada has awarded 1,906 postgraduate scholarships and 158 postdoctorate fellowships for 1974-75, estimated at a total of \$9,100,000. The scholarships have a value of \$4,050 for 12 months; the fellowships, \$9,000 for 12 months.

These awards represent an important aspect of the Council's effort to maintain a basic capacity for research training in science and engineering. The object is to support the provision of postgraduate scientific manpower for the creation of knowledge and the application of science related to Canadian needs.

Postgraduate scholarships are awarded to first class students to enable them to pursue graduate studies leading to the Ph.D. degree. Postdoctorate fellowships are awarded to recent Ph.D. graduates to help them in acquiring additional research experience which, in many instances, is a prerequisite for an academic or industrial career.

ECE timber committee tour Canada

More than 100 senior government officials and industry leaders from 15 European countries and the United States recently took a cross-Canada study tour of the forest industry.

The visitors, who were here for two weeks, were representatives of the Economic Commission for Europe (ECE) Timber Committee. This is the committee's first study tour outside Europe and came at the invitation of Industry, Trade and Commerce Minister Alastair Gillespie.

Canada became a full member of the ECE last July after some years as an

observer in this organization.

The objective of the tour, which ended June 8 after visits to Quebec, Ontario and British Columbia, was to exchange technical information and to provide European countries with a better understanding of Canada's forest resources, technology and industrial potential.

The delegates examined the Canadian technology of lumber and plywood manufacture; transport, handling and distribution of forest products; quality control and other related activities.

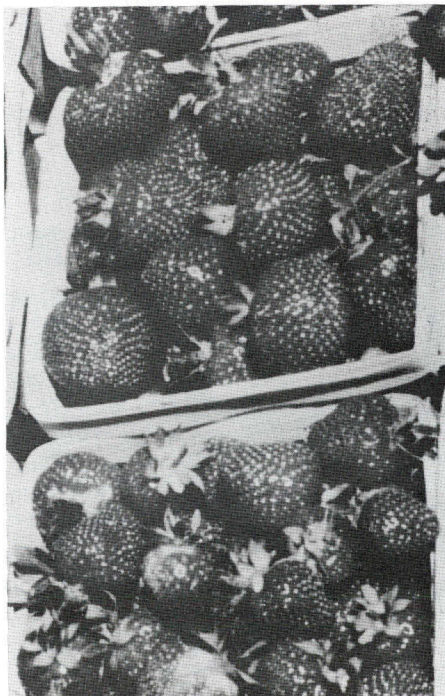
The Economic Commission for Europe is a permanent institution of the United Nations. Delegates were from Belgium, Britain Czechoslovakia, France, Finland, Germany, Hungary, Italy, Ireland, the Netherlands, Norway, the Soviet Union, Spain, Sweden, Switzerland, and Yugoslavia, in addition to the U.S. and ECE headquarters staff in Geneva.

Strawberry success story

Two years after its release, Bounty strawberry is coming on strong as a major variety for eastern Canada.

Developed at the Agriculture Canada Research Station in Kentville, Nova Scotia, the new berry has passed one field test after another with flying colours.

"It looks better than we expected



all round," says Don Craig, head of the berry-breeding program at the station.

"It yields higher and more dependably than other eastern varieties; it extends the berry season by seven to ten days; it is very resistant to gray mold disease, has top quality for fresh desserts or frozen packaging and is easy to pick in commercial plantings or your home garden."

The summary of its virtues makes Bounty look like a runaway competitor against longer established varieties in eastern Canada. But not so, according to Dr. Craig. "Because of its later ripening date, Bounty is no threat to older varieties, such as Redcoat, which have finished their season before Bounty is ready for harvest. This was the first reason for producing Bounty — to extend the fruiting season."

Yields from testings during the past three years average 18,145 pounds an acre for Bounty, compared to 14,200 for Redcoat, the main variety grown in the east. The berries often measure up to an inch-and-a-half in diameter.

The extent of Bounty's resistance to gray mold disease, which can drastically reduce yields from other varieties, is an extra bonus.

Touring arts directory

The Touring Office of the Canada Council will publish a new directory of the performing arts available for touring in Canada. It will include information on professional performing artists and attractions available for tour bookings in 1974/75; individuals and organizations who sponsor attractions in their communities; theatres, halls and auditoriums. The directory, which is expected to appear in September, will be distributed in Canada and abroad.

Information to the arts community has been one of the major tasks of the Touring Office since its formation in April 1973; the directory will help fill this need.

To be listed in the first edition of the directory, artists must be professional, residents in Canada and available for touring. All sponsors who can be identified will be listed, and most facilities in towns of 10,000 or over will be listed along with some technical information.

Portable station for Arctic satellite communications

The Canadian oil industry and Canada's telecommunications carriers are carrying out a unique experiment in the extension of voice and data communications to the high Arctic.

Co-ordinated by the Canadian Petroleum Association, Telesat Canada, Trans-Canada Telephone System and Canadian National Telecommunications direct dial telephone and teletype service has been established between Calgary and oil rigs located in the Mackenzie Delta.

The service is provided through Anik 1, Canada's domestic communications satellite, via a transportable earth station furnished for the experiment by Hughes Aircraft Company.

CNT, which already provides public telephone and other telecommunications services to the Western Arctic, is working with TCTS and Telesat in investigating the benefits of portable earth-station facilities in the provision of special temporary communications.

Local call, 2,000 miles away

The oil rigs will be directly connected to the Alberta Government Telephones exchanges and the CPCN Telex exchanges in Calgary. This means that all calls to and from the remote sites will be local calls, even though they originate 2,000 miles away.

The actual message signal will travel about 50,000 miles. A call transmitted by the remote earth terminal will be relayed via Anik, 22,300 miles away, to Telesat's main earth station at Allan Park, Ontario, and then routed to Calgary over dedicated terrestrial links.

Gulf, Imperial and Shell, the three major operators in the Delta, are initially involved in the trials.

The Mackenzie Delta experiment is intended to demonstrate the capability of the marriage of the new satellite technology and the terrestrial facilities of the telecommunications carriers in meeting unique communications needs of Canadian industry in remote areas.

Royal Canadian Air Force fiftieth anniversary

Although the Royal Canadian Air Force (RCAF) no longer exists, fond memories of it are still alive and well. In April, hundreds of former RCAF personnel plus present day-air element members of the Armed Forces attended observances, both in Canada and overseas, to mark the fiftieth anniversary

of the founding of the Royal Canadian Air Force.

The RCAF came into existence on April 1, 1924, with a strength of 300 officers and men. This date, however, does not mark the beginning of Canadian military flying since approximately 22,000 Canadians served during

the First World War with Britain's Royal Flying Corps, Royal Naval Air Service and Royal Air Force. Just before the war ended, Number 1 Canadian Wing of the Canadian Air Force was formed but shortly after the war this force, which consisted of two squadrons and a headquarters, was disbanded.

On February 28, 1920, the Canadian Air Force was re-formed as a non-permanent force then, some four years later, it was granted the "Royal" prefix and the motto - *Per Ardua Ad Astra* - through adversity to the stars. In the postwar years the RCAF carried



Sergeant Shatterproof marches proudly on. Former members of the RCAF will recall with nostalgia the indomitable NCO who, along with his unsolicited advice to senior officers, appeared regularly in the RCAF magazine Roundel.

out many tasks such as forestry patrols, aerial survey and anti-smuggling, which are not generally associated with military activities.

Second World War

Then came the Second World War and a new generation of Canadians flew in the propwash of their illustrious predecessors. They lived up to their reputation. Thousands of Canadians flew with distinction from the fog-shrouded



Canada's Billy Bishop was the British Commonwealth's leading fighter pilot

in the First World War. He shot down 72 enemy aircraft.

Aleutian Islands to the scorched Egyptian desert and a hundred places in between. By the time the Second World War ended, the RCAF had become the fourth largest Allied Air Force.

After the Second World War, the RCAF greatly dwindled in size but it continued to carry out a vital role both in Canada and overseas on NORAD, NATO and UN assignments. In 1964, with integration, the RCAF ceased to exist. Today the air element of the Canadian Armed Forces fly whenever and wherever they are needed, and uphold the proud traditions of RCAF fliers who went before them.

Hospital grants

Health and Welfare Minister Marc Lalonde recently announced that the Federal Health Resources Fund had awarded 18 grants totalling \$29,298,832 to be used in the planning, construction, renovation or purchase of equipment in health-training or health-research facilities.

The Saint John, New Brunswick, regional hospital will receive \$182,889 for its planning program. Facilities will be expanded to offer specialized services to the whole province.

L'Hôpital de l'Enfant-Jésus de Québec will receive \$2,698,800 for the construction of a new wing.

L'Hôpital Saint-Sacrement de Québec will receive \$355,580 for renovations.

The City of Laval's new hospital complex will receive \$10,179,285 for the construction of a new 335-bed hospital to serve 240,000 people.

The Maisonneuve Hospital will receive \$3,301,038 for the construction of a service unit for teaching and research.

Two grants totalling \$3,110,469

awarded to the Montreal Heart Institute will be used to enlarge the present building. Construction work is to be completed in 1975. A further grant of \$2,612,444 has been awarded to l'Institut de Diagnostic et de Recherches Cliniques de Montréal for the conversion of existing facilities as well as the addition of three floors.

The Health Resources Fund has awarded a grant of \$489,994 to Sainte Justine Hospital in Montreal for research laboratories.

The Woodroffe campus of Algonquin College in Ottawa will receive a \$239,976-grant to assist with the cost of facilities provided for the training of students of dental hygiene and dental assistants.

Hospitals in the Kingston area will share two grants: St. Mary's of the Lake Hospital will receive \$1,828,550 to assist in the renovation and expansion of the hospital; the Kingston General Hospital will receive \$1,539,918 to assist with the cost of building a new ambulatory-patient clinic. The hospital is adjacent to Queen's University and a number of medical students and nurses will use this clinic as part of their training.

In Toronto, the Sunnybrook Hospital will receive two grants totalling \$1,450,708 to assist with renovation costs. The former Veterans' Hospital will become a modern teaching institution for students of the University of Toronto.

The University Hospital, Saskatoon, will receive \$131,000 to assist with the cost of an addition to its building. It will house the rehabilitation medicine program providing treatment facilities for physiotherapy and occupational therapy.

The Holy Cross Hospital in Calgary will receive a \$895,446-grant for its psychiatry unit.

Successful season for National Ballet

The National Ballet of Canada returned to Toronto in the second week of May from an eight-week tour of the United States, with guest artist Rudolf Nureyev.

The Company closed a 16-performance engagement at the Metropolitan Opera House in New York, last stop on the tour, to a packed house including stand-

ing room. In their 55 performances in the U.S. the Company played to a total attendance of 169,973 people and an average audience-capacity of 80 per cent. Opening in Boston on March 12, the Company appeared in Chicago, San Francisco, Los Angeles, Milwaukee, Detroit, Hartford and Providence prior to New York.

The U.S. tour concluded the National Ballet's 1973/74 season, with the artists now on holiday and reassembling for rehearsal in Toronto on June 20. Since the beginning of the 1973/74 season at Ontario Place last August the Company gave 149 performances and played to 418,577 people in Canada and the United States. Ontario Place '73 was followed by engagements in Hamilton, Windsor and London (Ontario) and the Western tour to Edmonton, Calgary, Winnipeg, Regina and Saskatoon in the fall. In November it staged the Choreographic Workshop in Toronto and played the Toronto and Ottawa engagements of *The Nutcracker* at Christmas and the spring season with guest artist Rudolf Nureyev in Toronto and Ottawa in February and March prior to the U.S. tour. Including rehearsal and performances, the National Ballet season ran 44 weeks of the year.

Canadian housing 1973

(Continued from P. 2)

intergovernmental approach was endorsed and supported by delegates to the Federal-Provincial Conference on Housing in Ottawa last January. Housing was an important matter for discussion at the national Tri-level Conference on Urban Affairs in Edmonton in October, at a number of provincial tri-level conferences, and at bilateral conferences with the provinces. In December the Minister, accompanied by CMHC officials, made a tour of provincial capitals to meet appropriate ministers and discuss a number of issues, including implementation of the new programs, increased activity in land assembly, and legislative provisions of an improved Sewage Treatment Assistance Program.

Finally, as the year ended, the Corporation was ready to enter the first phase of its reorganization plan for decentralizing its authority and resources to local offices.

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