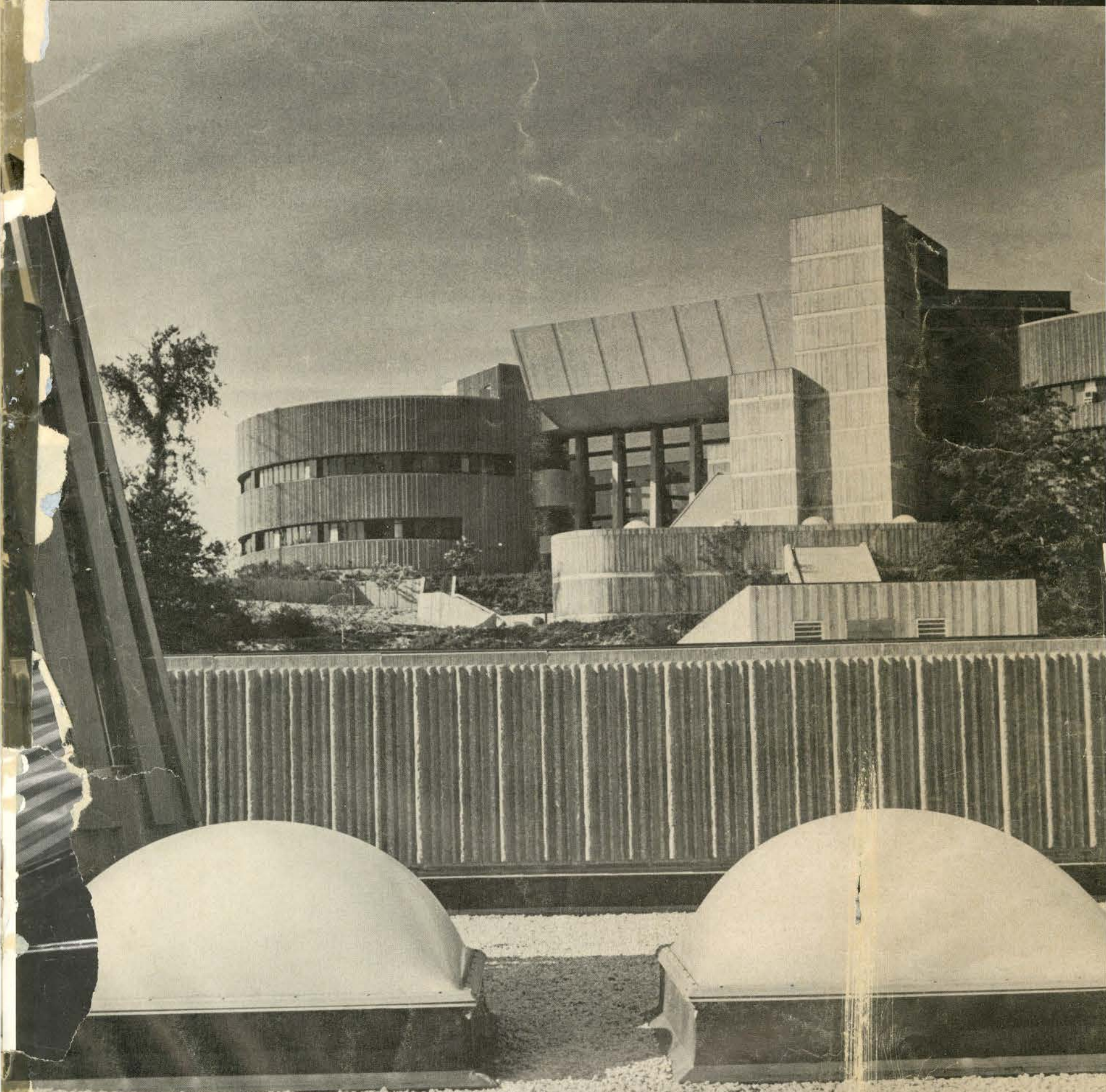


# Architecture Canada

September/Septembre 1969  
Royal Architectural Institute of Canada  
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# IN BRIEF

## Prus wins RCAF Competition

TRENTON — In awarding first prize of \$23,500 to Montreal architect Victor Prus, the jury for the RCAF Memorial Architectural Competition said they found "A scheme of profound clarity and simplicity which succeeded in making all aspects of the Memorial contribute to the vitality and pleasure of the whole." (See also page 5)

## Competition for Regina City Hall

REGINA — The city will hold a national competition for the design of a new city hall. E. H. Grolle, SAA Past President, heads an Association committee advising the city on the proposal. Morley Blankstein FRAIC, Winnipeg, is professional adviser. Council sold its old city hall site for \$621,000 for the Midtown Shopping Centre development in 1965 and bought the 63-year-old federal post office for \$100,000 for interim use as a civic administration centre. (see page 4)



Henry Grolle, MRAIC

## Calgary gets Architecture School



E. Raines, FRAIC

CALGARY — Canada's next school of architecture will be part of a new Faculty of Environmental Design to be established at the University of Calgary, probably next year (see page 4). E. Raines, FRAIC, Calgary, President of the Alberta Association of Architects, which has long worked for a school for Alberta, offers AAA co-operation to establish guidelines.

## Two Canadians win PCI Awards

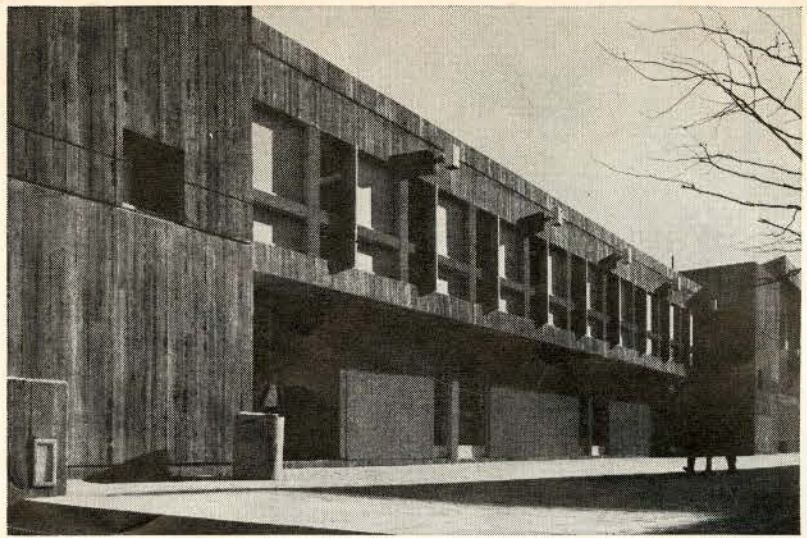


CHICAGO — Two Canadian projects were among 12 winners of the 1969 Prestressed Concrete Institute Awards — the Ontario Science Centre, Metropolitan Toronto, by Architect Raymond Moriyama (see page 13); and the Romeo Lorrain Bridge, at Notre Dame du Laus, P.Q., by the engineering firm of Roy, Bergeron, Garipey et Associées. The new Boston City Hall also won an award.

AIA President George E. Kassabaum was chairman of the jury, which included Ray Affleck, FRAIC, of Montreal.

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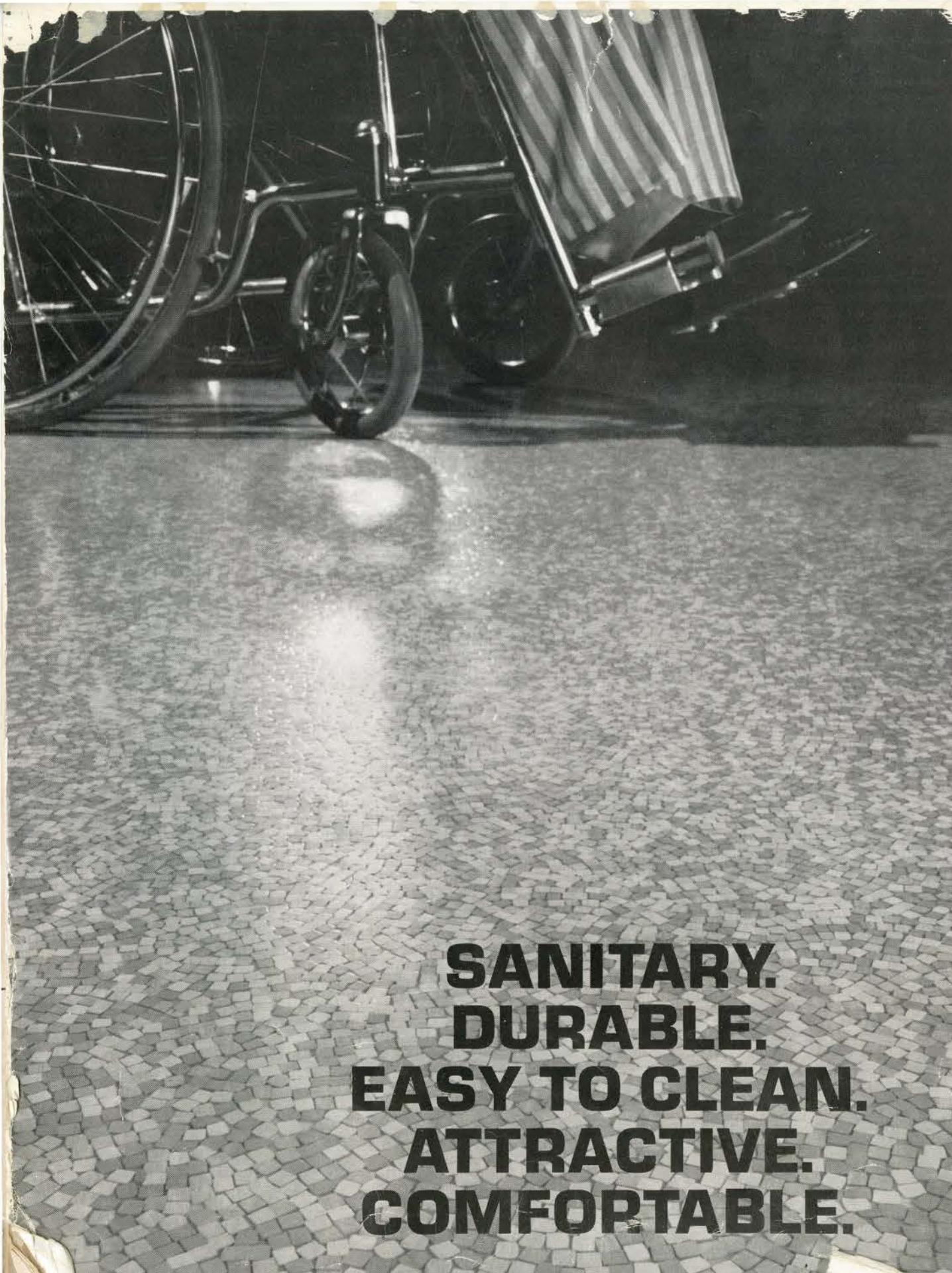
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the attractive floor**

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**Tessera Corlon,  
the comfortable floor**

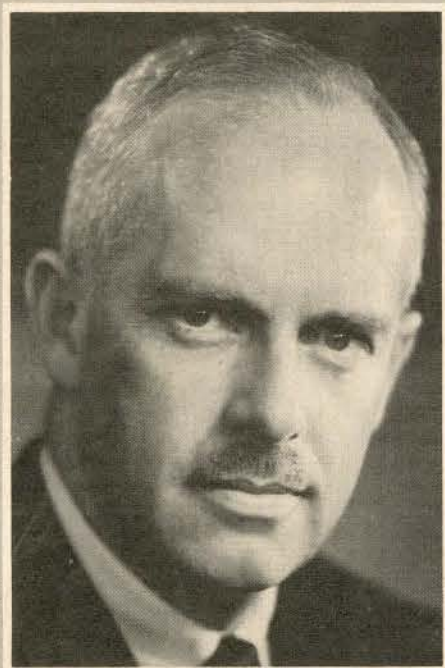
There's more to Tessera than surface beauty. It has a greater resiliency than tile or terrazzo flooring. This means it's quieter underfoot—a quality appreciated by both patients and staff. The "give" it provides is especially welcomed by staff members who are on their feet so much of the time.

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## New Format Means Better Publication

Architects across Canada have for some time asked for a much more open and varied editorial approach to convey ideas and achievements in their Profession and in the Allied Arts and Sciences of the Construction Industry. With a new format for Architecture Canada and a certain feeling of editorial exhilaration, we plan to publish an incisive record of the "here and now" not possible before. Our staff, being augmented in every region of the country, intends to search out where leadership is in the fields of design, research, development, business and all other important matters of concern to architects. We expect "brickbats and praise" for the effort, since some articles will be critical and analytical in order to examine ourselves as others see us. The continuation of lively news and pictorial coverage depends in large part on member participation. Stimulating people, buildings and happenings, wherever they may be, must be known by our staff as soon as possible.

We plan to become an open forum and a link with the activities of all levels of government, and with consulting engineers, landscape architects, specification writers and all sorts of peripherally related segments of the building industry, such as real estate and finance. Manufacturers and suppliers will find the readers of our pages are eager to learn about products, materials, equipment and methods so that the latest and best will be a vital part of the architect's knowledge.

When much of what we all read is unnecessary, repetitious superficial and poorly prepared, Architecture Canada expects to convey a clarity of expression and understanding as well as an excellence that cannot be an imposition on time and energy.

*W. N. Greer*

W. N. Greer  
Publications Board Chairman

# New Architecture School at Calgary

CALGARY — Canada's tenth school of architecture will be established on the Calgary campus of the University of Alberta, probably in 1970, according to Edwin Raines, FRAIC, President of the Alberta Association of Architects and AAA representative on the Alberta Universities Commission. The school is expected to be the major department in a faculty of environmental design, which will also include landscape architecture, town planning and, possibly, interior design. The AAA has offered to assist any way it can with the establishment of the new school and Mr Raines is now preparing to enter into discussions between the University and the profession to establish guidelines.

The new institution will actually be Alberta's second school of architecture. The first within the Faculty of Engineering of the U of A at Edmonton, closed down 30 years ago at the outbreak of the Second World War. Eleven of its graduates are members of the Alberta Association of Architects today.

The movement to again provide architectural education in

Alberta began in 1960 when Dr. Thomas Howarth, of University of Toronto, recommended that new schools in Canada be established in the following priority: Atlantic Provinces, Alberta, Ottawa or Southern Ontario, Quebec, Saskatchewan and, afterwards, other small centers. (Four new schools have since opened Halifax, Quebec, Ottawa and Waterloo).

The Alberta Association of Architects appointed a committee composed of Mr. Raines, chairman, A.M. Bowers, D.G. Forbes and D.L. Sinclair, to prepare a report on the need for a school of architecture for Alberta. This was submitted to the Alberta government in December, 1965 by Howard Bouey, the then AAA President. The report recommended establishment of an advisory committee representative of the AAA and the RAIC, the government, the universities at Edmonton and Calgary and the Conference of the Canadian University Schools of Architecture. Its responsibilities included recommending a director and assisting the director to find staff; and helping with administrative organization and ed-

ucational policy. The association anticipated controversy over the location of the school (Calgary or Edmonton campus of the U of A) and recommended that a study be made by an independent team of experts of which of the cities was more suited to the establishment and growth of an architectural school.

In 1967 the advisory committee on location was appointed and in 1968 it recommended to the Co-ordinating Council of the Universities of Alberta that Edmonton be chosen. In April of this year the Universities Commission reversed this proposal and decided to establish the new school at the University of Calgary, because it was felt, as a matter of policy, that new disciplines should, where possible, be established on the newer campuses of the U of A.

There has always been strong competition between the two Alberta cities in all forms of human activity and the switch of the new school's location to Calgary brought prompt and vigorous protest from the university, the students, Edmonton City Council and Edmonton's only newspaper, the Journal. The Commission reconfirmed its decision in July and (presumably) the contentious issue of where Western Canada's new school of architecture is to be located has been settled once and for all.

## Prus Wins RCAF Memorial

TRENTON — Montreal architect Victor Prus, FRAIC, ARIBA, has won the national competition for the design of a Royal Canadian Air Force Memorial. Born in Poland, Mr Prus studied architecture, engineering and urban design in Warsaw, Paris and England, and taught and practiced in the UK before opening a practice in Montreal in 1952. He was architect for the Expo '67 Stadium and two of the city's subway stations.

The competition, which was in two stages, attracted 99 entries from the 460 architects who registered. First stage winners were Mr Prus; Cohos-Delesalle & Evamy, Calgary; Michael Kopsa, Toronto and Henri Brillon, St-Lambert, Que. Finalists received prizes of \$6,500 each and the winner's prize is an additional \$23,500.

Eric R. Arthur, FRAIC, Toronto, was professional adviser and members of the jury were



Victor Prus, FRAIC

Charles Elliot Trudeau, MIRAC, Montreal; Brig.-Gen. D.R. Adamson, representing the RCAF; and Charles Moore, head of the Yale School of Art and Architecture.

The Department of National Defence has donated a site at what used to be known as the Trenton RCAF Station, between Toronto and Kingston, and a fund will be raised through public subscription for the complex of memorial buildings, estimated at about \$2.2 million. Photos of the winning entry will not be available until a model is built for public display to launch the subscription campaign.

## Regina to Hold Nationwide Competition for New City Hall

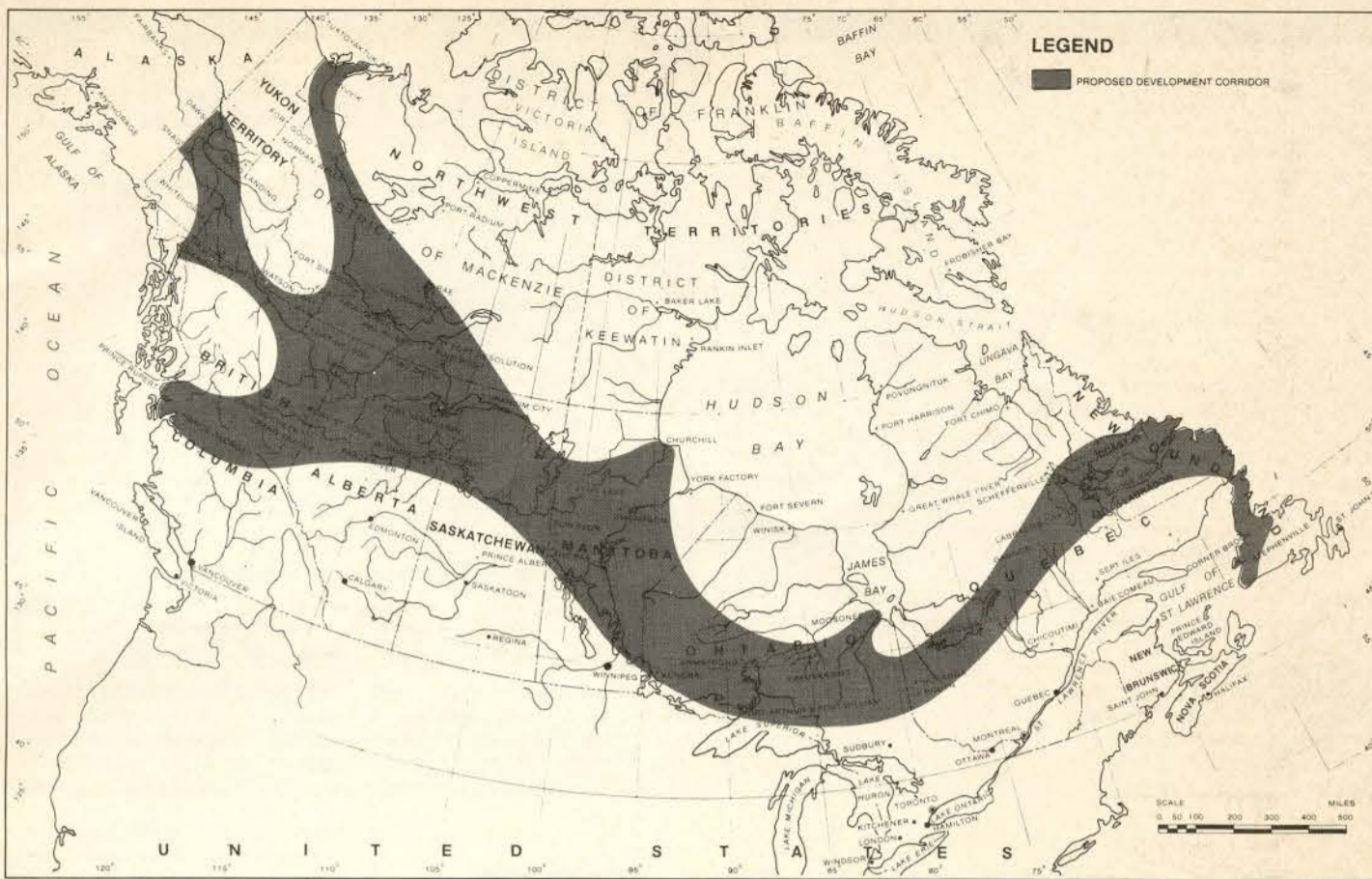
REGINA - A national competition for the design of a new city hall for Regina has been approved by City Council. E. H. Grolle, MRAIC, chairman of a Saskatchewan Association of Architects' committee which has been advising City Council on the project, reports that Council has reversed its earlier decision to confine the competition to Regina architects. In addition, Morley Blankstein, FRAIC, of Winnipeg, professional adviser for the competition has recommended that the new city hall be located in the core of the downtown area rather than on a civic centre site, designated for the purpose in a community planning scheme prepared for the city 25 years ago by Dr. E.G. Faludi, Toronto city planner.

Council sold its old city hall site for \$621,000 for the Midtown Shopping Centre Development in 1965 and then bought the 63-year-old federal post office building for \$100,000 for interim use as a civic administration centre. It also acquired about five acres four blocks from the city core for the future civic centre, which in addition to a city hall, was to include a school board administration facility, public library and community centre. Today, Dr. Faludi still thinks that his civic centre proposal is best because it would contribute to the desirable development of that area of the city.

## AAA Design Awards

EDMONTON — The Alberta Association of Architects has decided to institute an annual design awards program to recognize Alberta architects and building owners who have contributed to the advancement of the profession and of good architecture in the province through the design and erection of buildings of distinction. The jury for this year's program will be K. C. Stanley, FRAIC, Chief Architect,

Federal Department of Public Works; E. H. Grolle, MRAIC, Regina, immediate past president of the Saskatchewan Association of Architects; and Nicholas Roukes associate professor of art at the University of Calgary. It is planned to present the awards at the annual meeting of the Association January 23-24. The public will be invited to the event, which will be held in the new Edmonton Art Gallery.



## Vienna Contest Announced

A new competition has been announced for architects and landscape architects by the Municipality of Vienna for the planning of a horticultural exhibition and related buildings including hotels, restaurants, a gymnasium, playgrounds, etc.

First prize of AS 250,000 (approximately \$10,500) will be awarded only if the jury is unanimous. The second prize is AS 200,000, third prize AS 100,000, and fourth prize AS 80,000 (approximately \$8,400, \$4,200 and \$3,360 respectively).

The conditions are available now, closing date for registration and last date for questions is October 4 with answers to be issued by November 3, last date for dispatch of entries is February 6, 1970 not to be received later than February 20 at 3:00 PM. The jury will meet in April 1970.

A refundable deposit of AS 1,000 (approximately \$42) must be paid to Postal Account 210.000 of the Stadthauptkasse de Stadt Wien with remittance marked "Ideenwettbewerb WIG 74" before applying to the promoters for the conditions and accompanying documentation. All correspondence should be addressed to The Municipality of Vienna, Magistratsabteilung 42, Stadgarnnamt, Am Heumarkt 2b, A-1030 Wien.

The jury consists of Gustav Allinger, West Germany, G. Martinsson, Sweden, M. Mosconyi, Hungary, Eric Christian Sorensen, Denmark, and Rudolf Koller, Ernst Plischke, A. Auer, all of Austria.

# Architects at Mid-Can Corridor Talks

The Mid-Canada Corridor Conference, which brought together leaders in industry, commerce, government and the professions at Lakehead University in late September, may very well turn out to be the most important contribution yet to the long-range economic and social development of Canada.

The Corridor is the idea of Toronto lawyer Richard Rohmer and the conference and its continuing program mark acceptance where it counts of his proposal for a vast research program into possible future mid-Canada development.

For copies of the Conference papers and other information about the Corridor write Public Relations Department, Mid-Canada Corridor Foundation, 480 University Ave., Toronto 101.

Costs of the conference and its continuing field research program in the Canadian North and abroad in Northern Europe are born by the individuals and firms participating — for architects, for example, contributions range from \$3,500 to \$5,000 depending on the size of the firm.

Seven multi-discipline task forces were established to explore the corridor, to get its "feel" and to assess all its aspects. It is hoped that this exploratory work will come up with an answer to the question of whether it is feasible to create a national policy for the development of the Corridor and, if so, the nature of the agency to carry it out. Likely this would be an "institute" kind of organization, jointly organized and operated by the government and private sectors. The seven task forces will investigate communications, environmental and ecological factors, finance and trade implications, transportation, urbanization, resources and industrialization.

The ten architectural practices

represented are mainly concerned in the environmental and the urbanization task forces.

Gordin Atkins, MRAIC, of Calgary has ten capsule comments on his impression of what the conference discussed and the conclusions he came to.

1. On the concept that an increase of 100 million in population over the next century will cause population movement into the North: the figure of 100 million seems unfounded and even if it is realized, the necessity, or likelihood to move north is unrealistic.

2. In 60 to 70 per cent of the Corridor area the climate is as acceptable as that of other growth centers, such as Edmonton or Winnipeg.

3. The transportation network would be mixed and would not likely develop in an east-west line. High speed communication to resource sites from a central node is more likely.

4. The communication network is already established in almost all areas of the Corridor, but requires more local involvement and program attitudes to remove the acute sense of isolation to which non-converts to such a way of life may be subject.

5. The axis would seem to develop along north-south, with the funnel at Toronto for the east-



Gordon Atkins, MRAIC

west concept. Much of the Corridor would be left as wilderness for recreational and conservation purposes.

6. The opinion was that a group other than the Federal government should be the active force behind the plan. Much Federal and Provincial money would, however, be required — possibly five billion over 40 to 50 years.

7. There was much concern that eastern industry and eastern financing would overwhelm the development prospects, with Ontario controlling the lion's share. Some

delegates thought that provincial regionalism was essential for co-operative developments.

8. It is essential that we save the indigenous quality of the people and the region. We should build to express the attitudes of those who are native to the region rather than transplant our technology or work habits, our urban environment, culture, clothes, food, etc.

9. The planned ten-day trips of the delegates through the corridor from Nova Scotia to the Yukon this winter, and, next year, trips to the Latvian area, north Sweden and Russia, will be useful.

10. In all this, what should architects and the architectural profession do? Learn what it is all about and reserve judgement? Or move in now to influence decisions?

Architect delegates present in addition to Mr Atkins were R. Moriyama; F. C. T. Rounthwaite (F) of Marani Rounthwaite and Dick; W. Ballyn of Webb, Zerafa, Menkes, all of Toronto; Clifford Wiens, Regina; H. H. Moody (F) of Moody, Moore and Partners, Winnipeg; Dennis Carter (F) of Smith, Carter Parkin, Winnipeg; Richard Mann of Thompson, Berwick and Pratt, Vancouver; and, as an observer, Peter Goering of Somerville, McMurrich and Oxley, Toronto.

## Neutra to be Honored by Vienna

The Austrian Government has announced that it proposes organizing a "Vienna Congress on Architecture" in honor of the 75th anniversary of Richard Neutra, who was born in Vienna, if enough international interest in

participation is expressed.

The congress would be held, at the earliest, in May 1970 and every five years thereafter. The purpose would be to honor significant international architecture including examples from developing

countries, and eventually to organize an international competition.

The Austrian Embassy in Ottawa asks that architects make known their interest in participation in this proposed congress.

## DBR Seminars Ottawa-Calgary

The durability of building materials will be the subject of a Building Science Seminar to be presented in Ottawa and in Calgary by the Division of Building Research, National Research Council of Canada. The two-day Seminar will be offered twice in Ottawa, 17, 18, and 20, 21 November 1969, and once in Calgary, 27, 28 November 1969. Advance registration required. Write L. P. Ruddy, Administrative Officer, DBR, NRC, Ottawa 7.

## COMING EVENTS

1969 Prestressed Concrete Convention, Sheraton, Boston, Oct. 5-9.

17th Annual Joint Engineering Management Conference, Hotel Bonaventure, Montreal, Oct. 9-10.

Conference on Quality Control in the Building Industry, sponsored by the British Ministry of Public Works, in conjunction with the International Building Exhibition, London, Nov. 18-19th.

See also DPR Seminars listed above and Seven Regional conferences on the Systems Approach to Building, page 7.

## Funny Talk about Aesthetics?

The Burrard Inlet Crossing of Vancouver Harbor, as set out in the Swan Wooster - CBA Report, was commented upon by Ron Thom in your June issue. May I comment on his "comment"?

It was kind of him to write "The Swan-Wooster study is obviously the best of a dreary batch so far." But he goes on to say that "In none of the documents presented, however, did I see the 'style' of the City commented on".

The Federal Government did not ask Swan-Wooster - CBA to plan the City of Vancouver or to determine its style or "its desirable shape and form or its ideals". The Planning Department of the City of Vancouver is concerned about such considerations. "What Kind of City do you Want?" is the title of a recent booklet prepared

by them. This does not mean that the Swan-Wooster - CBA study ignored such questions. To the contrary, they were debated at great length with numerous civic organizations and officials of municipalities during and after the showing of a carefully prepared slide presentation which ranged beyond the crossing proposals into the field of environmental impact and aesthetics.

Comment includes the phrase "...some funny talk about something called aesthetics". Come off it, Ron! This is not criticism - it is journales. You know that "aesthetics" is that stuff you use in all of your own excellent designs. You redeemed yourself by adding "I may not have all the information available so I am ready to stand corrected about this."

When referring to Carrall Street which was one of the likely choices for a tunnelled distributor, although not chosen eventually, you write "One has to be

pretty gullible to believe that this street would actually be torn down, an open-faced tunnel cut, covered over, and the street built back on top."

Where is the difficulty? Only one side of this street was to be demolished - the sordid side with the run-down, mostly one and two storey properties which stand as islands among carparks. Nearly 50% of this side is open street ends and lanes. The air rights above the proposed tunnel would be valuable for a complete scheme of rebuilding. I suggest that we shall all live to see such comprehensive rebuilding in most Canadian Cities. May the good Lord help us if we fail to grasp such opportunities.

Your least convincing proposal, Ron, was when you advocated a diffuse flow of traffic... into the "existing street system". You said, "Once it is relieved of the job of passing all the through traffic from everywhere to everywhere, it should be able to handle

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internal downtown traffic with ease". Your own earlier comment was "the nineteenth century street system (Vancouver) is virtu-

ally what it was when it was built".

Your italicized sentence is revealing - "As long as it involves a tunnel, a highway or a bridge, let the engineers design the city". Shades of the old jurisdictional disputes between architects and engineers or planners and architects or whatever!

For the record, and speaking for the team of architects who assisted me in my role, it was a pleasure to work with SWAN-WOOSTER - CBA Engineers, and N. D. LEA Associates, transportation engineers. The collaboration started from the first day of work and not too late, as is more usual. We did not start with the benefit of an overall city plan to guide our concepts, but does Toronto give this kind of imaginative design leadership to those who build its bridges?

On the subject of "concerned citizens" you will be encouraged to know that never in the history of bridges and their approaches have so many citizens been consulted by engineers and architects as was done by Swan-Wooster - CBA. Invitations were made to all citizens' groups and individuals to express themselves, both during interim presentations (12 schemes) and final presentation (6 schemes). Briefs were submitted by 20 citizen organizations. In spite of all this activity, presumably unknown to you, you end your comment with this paragraph. "In this case is it fair to assume that enough has been said, particularly by informed and concerned citizens, to make many of the aspirations of Vancouverites quite clear? I wonder." Enough has never been said. There will always be a new voice to say "Stop the world, I want to get on!"

*Warnett Kennedy, MRAIC, Sub-Consultant: Architectural Planning, assisted by Zoltan Kiss, William Tong, John R. Kay, Architects*

### Vancouver Bridge

At last report, a decision on one of the Swan-Wooster - CBA schemes has been deferred by City Council pending investigation of an entirely new solution, proposed by the Vancouver Parks Board, and based on a new bridge paralleling the existing first Narrows Bridge plus a tunnel under Stanley Park. Ten years ago Christopher Cyoni (Outram), an architect then practicing in Vancouver proposed a suspension bridge at First Narrows Prospect Point, but a tunnel was not part of his solution (RAIC Journal Feb. 1960).

## CONCOURSE LOVES JUMBO-WEIGHT TRAFFIC

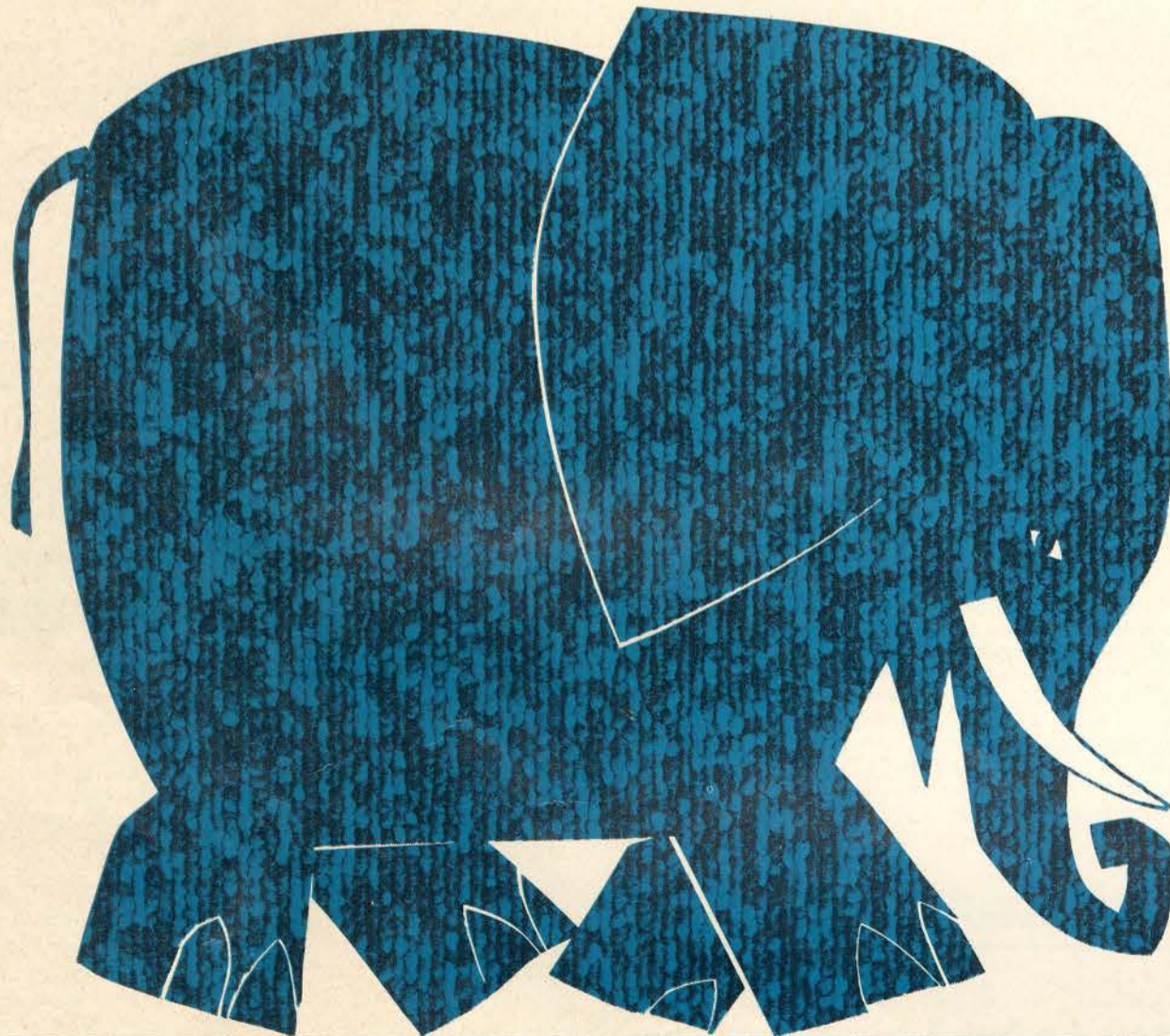
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# RAIC Offers Housing Studies

The RAIC has advised the Federal Government that, as a contribution towards solving the public housing problem in Canada, it is prepared, through its nine Provincial Associations, to obtain the views of the architectural profession on three major aspects of public housing: (a) performance of completed projects; (b) existing housing legislation; (c) basic housing philosophies and their possible implications.

The contribution was offered to Hon. Robert Andras, Federal Minister responsible for housing, at a meeting August 8 in Vancouver with RAIC President W. G. Leithead. It was the latest development in the Institute's continuing involvement in the public housing problem in Canada, which began last spring with an RAIC sponsored interdisciplinary conference to study the report of the



Hon. Robert Andras



RAIC President W. G. Leithead

Hon. Paul Hellyer's Federal Task Force on Housing. Later, Hon. Mr Andras, who replaced Mr Hellyer in the housing post, asked the In-

stitute to say what the architectural profession suggest be done to improve the quality of public housing in Canada.

The question was discussed at the Members' General Meeting at the Chicago Convention in June, and again by RAIC Council in July.

Mr Leithead reports that, in offering the help of the Institute on the public housing problem, he impressed upon the Minister the great interest of the membership in the problem and the profession's sincere and genuine recognition of its responsibility to society in the matter of housing and environment.

The submission to the Minister included an explanation of the findings of the RAIC sponsored interdisciplinary conference on the Hellyer Task Force report by its Chairman, Henry Sears, MRAIC. Since the meeting, nothing further has been heard, but news reports indicate that Mr Andras has expressed interest in a

United States study, "Urban Dynamics", prepared by Prof. Jay Forrester and Paul Ylvisaker, New Jersey Commissioner of Urban Development. The study recommends that the slum problem of cities be solved by cut-backs in welfare and public housing which would result in slum residents being forced to move elsewhere and so make land available for tax yielding industrial use. (There has been a federal halt on urban renewal schemes for some time now.) This "freeze-out the poor" policy has been rejected by Canadian sociologists as being irrelevant to Canada, this country's urban problems being radically different from those of the United States.

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Fiberglas Base Cap roof insulation has stood the test of time. The main reason is dimensional stability. Fiberglas does not shrink or swell with extreme temperature changes. It is also exceptionally fire-safe. Lightweight and durable, it is available in larger than average sheets to reduce the number of joints. The factory-applied base sheet prevents the asphalt from being absorbed by the insulation to give you a virtually impregnable built-up roof. Many architects and contractors who have tried other materials for flat or low-pitched roofs now concede that for proven performance and long-term economy, Fiberglas Base Cap roof insulation is the best available. Please write for further information.

\*T.M./4

## College of Fellows has New Dean



Allan F. Duffus

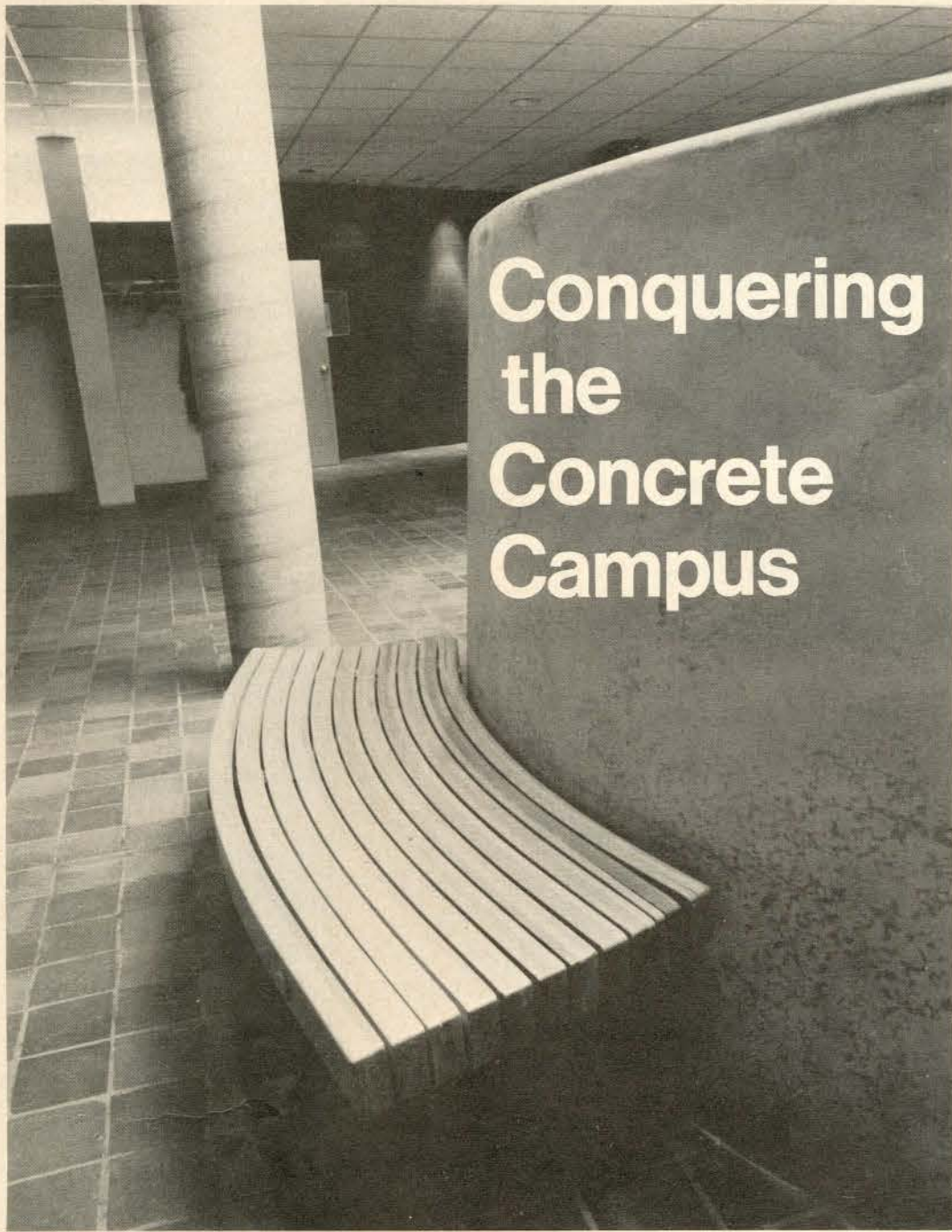
Allan F. Duffus, FRAIC, Halifax has been elected Dean of the RAIC College of Fellows in succession to Henri Mercier, FIRAC, of Montreal. Mr Duffus is partner in the Halifax architectural and engineering firm of Duffus, Romans, Kundzins and Rounsefell.

## Systems Conferences

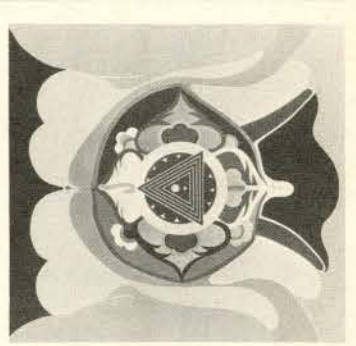
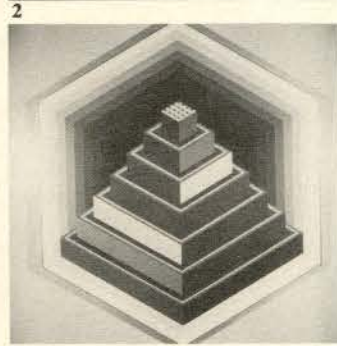
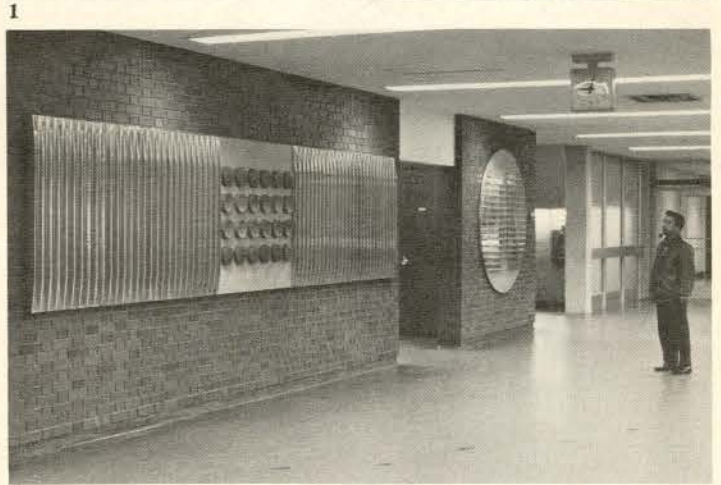
OTTAWA — Seven regional one-day conferences on the concept and implementation of the Systems Approach to Building will be held across Canada this fall. The conferences are organized by the Department of Industry, Trade and Commerce in co-operation with the RAIC, the ACEC, the CCA, the SWAC and the NHBA.

Dates and places are: Moncton, Sept. 30; Quebec, Oct. 2; Toronto, Oct. 8; Montreal, Oct. 16; Winnipeg, Oct. 21; Vancouver, Nov. 4; Edmonton, Nov. 6.

The program will consist of lectures in the morning, a luncheon address and panel discussions in the afternoon. Lecturers will be H. C. Auerback, Concordia Estates, and G. Corriveau of IRNES Inc., Montreal; Robert Halsall, P.Eng. and Roderick G. Robbie, MRAIC, of Toronto.



# Conquering the Concrete Campus



## Art on the Campus, Part 2

### News Item, Toronto

#### Prairie Group Splurges on Art

An art-buying committee from the University of Saskatchewan has purchased more than a dozen paintings, prints, and "assemblages" from six Toronto galleries. Professor S. E. Day of the university's fine art department announced yesterday. One gallery-owner estimated the value of the purchases at \$10,000 to \$15,000. They include works by Dennis Burton, Guido Molinari, Don Redinger, Gerry Santbergen and other Canadian artists. One of Robin MacKenzie's viewer-operated, sound-and-light constructions is still under consideration by the committee.

### Press Release, Edmonton.

#### Sculpture being Erected at U. of Alberta.

One of the outdoor sculptures, "Dyad", by Robert Murray, which was on exhibit at Expo '67 and "Man and His World" in Montreal is now being erected on the University of Alberta Campus in the small quadrangle south of the Rutherford Library - near the corner of 114th Street and 89th Avenue. The sculpture is a gift to the University by the House of Seagram Limited.

### News Item, Halifax

#### Dalhousie University: Art & The Law: The Dean's View

The installation of two major works of sculpture by Gord Smith on November 4 at the Weldon Building completes a major project of the faculty. In planning the new building provision was made for the incorporation of works of art.

In this Year of the Moon, 1969, an editor can be so titillated by communications news items as to believe communication with men of the campus to be a simple matter. Terrestrially speaking we are learning that manning the moon leads to quicker communication between parties than any separated bodies on this man's earth. Running an allied arts column is no exception.

Abandoning accurate detailed report for intuitive perception we have made a collage of impressions gathered from evidence sent to us (thankfully) from a few universities in Canada. Our gratitude goes out to the following for their cooperation: York, Waterloo, University of Toronto, Scarborough & Erindale Colleges, Queen's, UBC, Victoria, Alberta, Saskatchewan, Dalhousie, Trent and the Université de Montréal. The evidence they have furnished of their various activities, has helped, along with my own personal observation in the formulation of a somewhat sketchy impression of universities' actions and attitudes in general toward living art.

#### General Policy - Old and New

Most policies (if any) are by choice "free wheeling" and grow out of spontaneous action by those interested rather than being consciously formulated by hieratic bodies. There are however signs of change in newer universities - signs but not much action as yet.

With very few exceptions (most noticeable in western universities) Fine Arts Departments display towards living art a disinterest bordering on disapproval, presuming, I suppose that being drawn into commitments on current events is being unscholarly.

The departments on the whole

are more concerned with framing academic courses designed for degree collecting than with inspiring, through their courses, a new catalytic group of students who might be effectual either in the general environment within the university or later as professional catalysts in contemporary society.

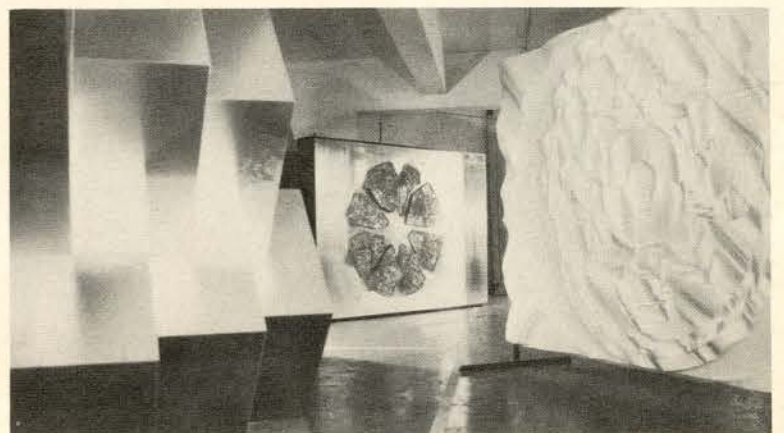
A fine arts student rarely meets the contemporary artists of his environment. He is more concerned with the motivations of Michael Angelo than those of Michael Snow. He is more concerned with archaic than with contemporary sociology. He is more perceptive about gothic



THE PERCEPTIVE EYE

Thirty-three artists will exhibit in a new kind of touring exhibition sponsored by the Art Gallery of Ontario. The theme is "Art for Architecture - Walls" and the exhibition was organized by our Anita Aarons. Artists were invited to explore the aesthetic and psychological impact of the "wall" and the result is most exciting (see below). Architects especially are invited to

the gala opening Sunday, September 21st, 3:30 PM at Scarborough College. The show will continue on to the Kitchener/Waterloo Gallery for November, and the Rodman Hall Centre, St. Catharines, for December. It will be also seen in the spring in Hamilton, Oakville and London, Ontario.



A sneak preview at the AGO warehouse of three pieces for the Art for Architecture - "Walls" Exhibition. Left to right are walls by Ray Spiers (aluminum), Margit Gatterbauer (illuminated glass in plastic) and Ted Bieler (styrofoam).



## ILLUSTRATIONS

1

*Framed fabric in corridor of the Mathematics and Computer Building at the University of Waterloo. Architects Webb, Zerafa, Menkes.*

2

*Tony Tascona's aluminum mural in the Fletcher Argue Building at the University of Manitoba. Architects, No. 10 Architectural Group, Winnipeg. Artist's address: 151 Taché Ave., St-Boniface 6, Man.*

3

*Gary Lee-Nova's "Untitled Hexagon", acrylic on canvas, at the University of Saskatchewan. See News item. Artist's address: 1114 Mathers Ave., W. Vancouver, B.C.*

4

*Dennis Burton's "Tantra Yoni Yantra-Brahmarandhra" oil, at the University of Saskatchewan. See News Item. Artist's address: c/o Isaacs Gallery, 832 Yonge St., Toronto 5, Ontario.*

5

*Louis Archambault's "The Tall Couple" in bronze, approximately 12' high, in main quadrangle at Scarborough College. Commissioned by House of Seagram for Expo '67, afterwards donated to Scarborough. Address of the artist: 278 Sanford Avenue, St. Lambert, Quebec.*



5

towers than the barrenness of campus corridors. His sights are hind-sights atrophied through looking backwards.

Hopefully protests to the contrary will prove this editor's vision is out of focus.

### New University Building

The mushroom growth of over-size campus complexes throughout Canada reveals an aridity of environment agonizingly familiar. Campus planning is inhibited by the same architectural conditions affecting the generally unsatisfactory environments of other institutional and commercial enterprises of the sixties. Although legislation exists for 1% of the building costs to be set aside for art in federal buildings, no such item appears in campus planning programs for Canada. Cost structures do not seem to prevent an over-extravagance in opulent amounts of concrete. The result is monolithic monuments to architectural design rather than contemporary technological economic solutions. Anonymous mazes of corridors and vast floors of concrete are barely saved by "approved" identifying graphics or broadloom "grasses".

A few enlightened architects may protest but in general the campus architect is an "artless" builder.

### Budgets for Art

Few real budgets exist for either the integration of art in any form

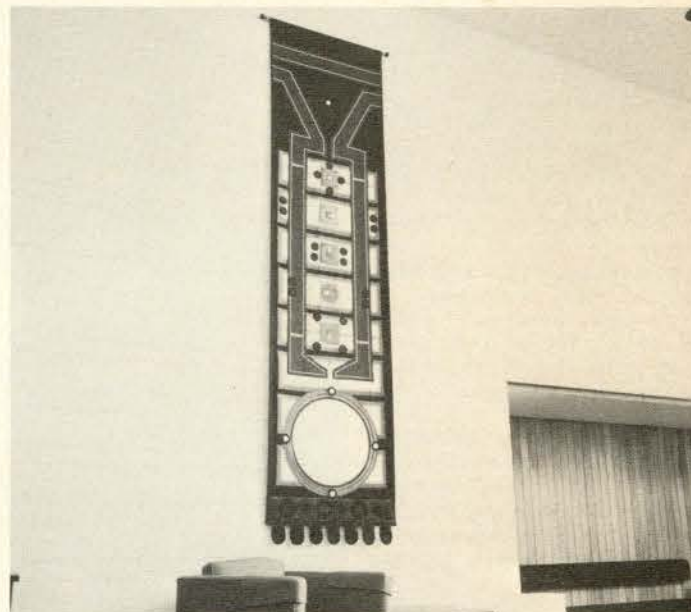
or for later purchase of art for general decor. Committees are sporadic, funds are drawn from faculty members, graduates or sympathetic private donors. In rare cases student bodies have become enthusiastic buyers of particular items. But even the gymnasium has more importance than the business of art in campus thinking.

### Living Art Program on Campus

Programs vary from staging exhibitions to the forming of permanent collections. The American practice of having resident artists is not widespread in Canada nor, when practiced, successful. The field of influence, outside the benefit to the artist himself, is negligible. Collections are, with exceptions, modest and tend toward the collection of local artists. With further experience a tendency to enlarge the field to a national basis has been seen. Very rarely does any university attempt collecting on an international level. They could broaden their collections, even with modest means, by including, by purchase or exchange, international work of a value equivalent to Canadian items, but they do not.

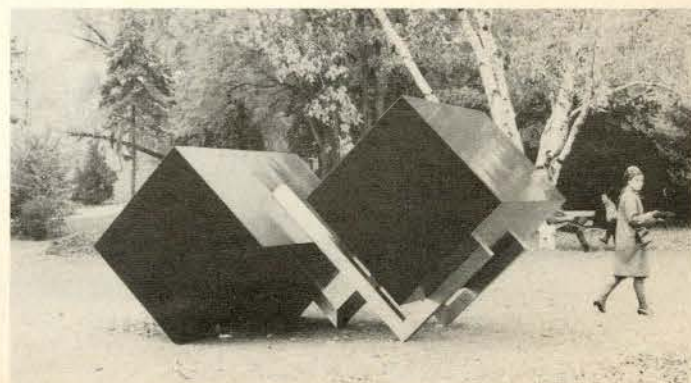
Generalization may look harsh, but one can be slightly more optimistic when one looks at particular programs. Specific programs of various universities will follow in the next issue.

Anita Aarons



6

*Felt banner by James Sutherland at Minota Hagey Building, University of Waterloo. Architect Raymond Moriyama. Artist's address: 812 Mount Pleasant Rd., Toronto.*



7

*Fiberglass and polished metal sculpture sited at the Erindale Campus of the U. of T. while on loan from the artist, Ray Spiers. Artist's Address: R.R. No. 3 Newmarket, Ontario.*

# Yale on Ice

by Peter Blake

Early on Saturday, June 14, at 3:58 a.m. to be exact, a violent explosion shook the famous Yale Art and Architecture Building, designed by Paul Rudolph and generally considered to be one of about a dozen of the most significant postwar structures, architecturally speaking, in the United States. The explosion was followed by others, and a spectacular blaze spread through several floors of the building, causing damage estimated at anywhere between \$500,000 and \$2 million.

The fire—quite possibly (but not necessarily) the work of an arsonist—made the front pages of the *Denver Post*, the *San Francisco Chronicle*, the *Washington Post* and, of course, the *New Haven Register*. The one newspaper in the entire United States that has been most conscientious about reporting on architecture kept inexplicably mum; for reasons best known to its management the *New York Times* failed to report on the Yale fire until almost two weeks after it had broken out—and after the *Times*' editors had been repeatedly needed about this business by fascinated parties, including reporters from the *Architectural Forum*. Stung into action by suggestions that Yale President Kingman Brewster had actually kept the story out of the *Times*, the latter's editors finally sent reporter Joseph Lelyveld up to New Haven, and published his rather laconic report on June 27—almost two weeks after Paul Rudolph's world-renowned building had blown up!

The cause of the Yale fire is listed by the police as "unknown." Although some reports immediately pronounced the cause to have been arson, the facts are far from clear. It is entirely possible that the highly inflammable liquids employed by architecture students to glue their drawings to illustration boards might have been ignited by some smoldering short circuit. Unlike New Haven's Fire Chief Francis Sweeney, who announced to reporters on the scene that he considered this fire "to be of suspicious origin until we prove differently," my inclination is to consider any Yale militants innocent until proven guilty without a shadow of a doubt. The disastrous fire at the northeast corner of 48th Street and Fifth Avenue a few months ago, which took 11 lives, also started in a drafting room equipped with lots of inflammable stuff, and nobody has suggested that that particular blaze was caused by a Black Panther.

Still, the Yale fire did dramatize a state of concern not limited to Yale's architecture students, but found at just about every school of architecture in the U.S. today; a profound uneasiness among students (and some faculty) about the priorities that today govern American architecture and American architectural education.

A week or so before the Yale building caught fire, a group of radical students at Yale had circulated mimeographed pamphlets suggesting that recipients had better visit Yale's buildings pretty damn soon, before it was too late. "Why has Yale not gone up in

smoke?" the pamphlet asked in its headline. And then, with eerie prescience, added: "See the Art & Architecture Building. See every building. See them soon." End of message.

Wow! Nobody took that pamphlet seriously until 3:58 a.m. the next Saturday morning, but people sure remembered the pamphlet then. What had prompted this rather sinister hint was a dispute between the faculty-student group running the city planning department, and the Yale administration, over the admission of about a dozen students, most of them black or Puerto Rican. The dispute is too complicated to recite here; suffice it to say that I think the faculty-student group acted in a deliberately provocative manner, and that Kingman Brewster blew his cool and allowed himself to be provoked. In any event, the self-styled "militants" at Yale strike me as so gentle a bunch of flower children as to make it highly unlikely that they would so much as set fire to a cigarette—much less to a favorite building.

But the dissatisfaction and the concern are very real—and not, by any means, only at Yale. All over the country, students at schools of architecture have been in the vanguard of radical action (and faculty members, too). At Columbia, at Berkeley, at Pratt Institute, at MIT and at Harvard—and in many other schools—students of architecture have been questioning the "relevance" of a profession that devotes most of its efforts to designing buildings for the rich (and for public or private clients that represent the Establishment and/or the "military-industrial complex") and very few of its efforts to designing for the poor. One of the more specific protests in this direction was aimed recently at the firm of Skidmore, Owings & Merrill (Lever House, Chase, etc.) for designing an office complex in Johannesburg, South Africa, which—according to the protesters—represented a bolstering-up of the racist establishment in those parts. "Somewhere an SOM architect," said one of the protesters, "is drawing two sets of bathrooms—white and black!"

Much of this turmoil in the design schools seems admirable to me. About a dozen years ago, when I used to get conned into teaching at places like Pratt and Cooper Union, I would despair of the deafening lack of concern among my students. The only thing that ever worried them then was how to land a job in the highest-paying drafting room.

Still, there is one very serious danger in the present chaos in our schools of architecture. About a year ago, I talked to four students from Columbia who had decided to drop out of school when they were just about to get their diplomas, and to go and work with ghetto community groups. I tried to help them find such jobs and, a few days later, ran into some people I know who operate one of those urban workshops in Watts. They can use plenty of trained and dedicated architects—black, white, yellow or what have you.



My friends' reaction was quite unequivocal: "For God's sake, tell those kids to go back to school and to get their degrees—what we need here are professionals with diplomas and so on, who can sign a building permit and know how to check out structural drawings. Tell them to go back to school and see us when they're done."

I agree, I don't know of any deeply concerned lawyers, doctors, sociologists or economists who have copped out on their own specialties because they don't like the Establishment. It's

all very well to be a "concerned" architect, but the way to prove it is to learn how to design a roof that won't leak. A leaky roof in Bedford-Stuyvesant is a much more serious problem than a leaky roof on Park Avenue—because in Bed-Stuy, the guy who's being leaked on is the guy who's go to fix the leak.

As for Yale, *à propos* nothing in particular, its school will reopen in the fall, probably in temporary quarters, and the tempest in the city planning department has been calmed a bit. Paul Rudolph's building will be repaired,

and the faculty will be back in business. The students will, I think, return a bit subdued; many of them lost all their academic records and all their portfolios of completed work in that fire. Although I still hope and believe that the fire was a freak, it brought home to everybody up in New Haven and elsewhere that the distance between threats and acts of violence is shrinking rapidly.

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# Ten Asked to Re-examine DPW

James Langford, FRAIC, Assistant Deputy Minister (Design) Federal Department of Public Works, recently held a small conference at Stanley House. Since his appointment to this post, Mr Langford has been concerned with more than merely running his department efficiently. He is also concerned with the quality and purpose of public works.

The conference was held to allow those concerned with, and about, public works to re-examine both the qualitative and quantitative aspects of public works.

While more questions were

raised than answered, the fact that an architect in this senior, official position has (a) expressed concern, (b) raised fundamental issues and (c) is seeking ways to improve the service that public works performs, is itself encouraging and holds the greatest promise of fulfillment.

Those who attended were Douglas Shadbolt, Director, School of Architecture, Carleton University; Allan Armstrong, representing the Canadian Council for Urban and Regional Research; Kiyo Izumi, Associate Professor of Social Science, Faculty of Arts and Science, University of Saskat-

chewan, Regina Campus; A. J. Diamond, architect and Corresponding Editor, Architecture Canada, Toronto; R. M. Leary, Assistant General Manager, Planning and Design Branch, National Capital Commission, Ottawa; D. G. Creba, Chief Architect, Ontario Department of Public Works, Toronto; John Adjeleian, structural engineer, Ottawa; Ian MacLennan, Vice President, Central Mortgage & Housing Corporation, Ottawa; J. A. Dugas, Deputy Minister of Public Works, Province of Quebec; and Terrence Sulyma Vice President, Ontario Union of Students, Toronto.

A.J.D.

## BOOKS

### Nursery Schools

*Le Corbusier (translator Eleanor Levieux) Fitzhenry & Whiteside, Don Mills, 1969, 88 pages, \$7.50*

Every so often when reading a publication associated with a great name one wonders whether it had its origins in the desire of the name to write or as a result of publishers' market research.

Certainly it is difficult to visualize "Nursery Schools" being in the first category. As a contribution to the world of nursery education it has come about 20 years too late, and as a contribution to Architecture we have had most of it before.

In 1954 the first "Notebook of

Patient Search" by Corbusier was published and titled "Une petite maison"; this was followed by "Ronchamp" and now the third is a random selection of theories and reminiscences connected (more or less) with nursery schools founded on the roofs of the Unite d'Habitat buildings.

In this book, as previously, people are cast by Corbusier into roles which fit into his own private version of the world and he only acknowledges their wants and actions to the extent that these fit into his interpretation of the order of things. This is Corbusier, of course: complete conviction in the rightness of his beliefs and single mindedness in pursuit of them; a man of super naivete, and one can leaf through this book emotionally like an old family scrapbook, the stated subject being largely incidental.

Here in fact we have yet another glimpse of the character of one of the great men of this century, and perhaps this is reason enough for publication.

Neil Jackson, MRAIC, Victoria

### Prefabrication: A History of its Development in Great Britain

*National Building Studies Special Report 36 R. B. White. Her Majesty's Stationery Office, 1964, 354 pages, 50 shillings.*

Prefabrication — and now industrialization — catch-all names that conjure up images of clip-fit plug-in space-age building technology! How we all dream of ourselves as the inventors of the system to end all systems — the panacea!

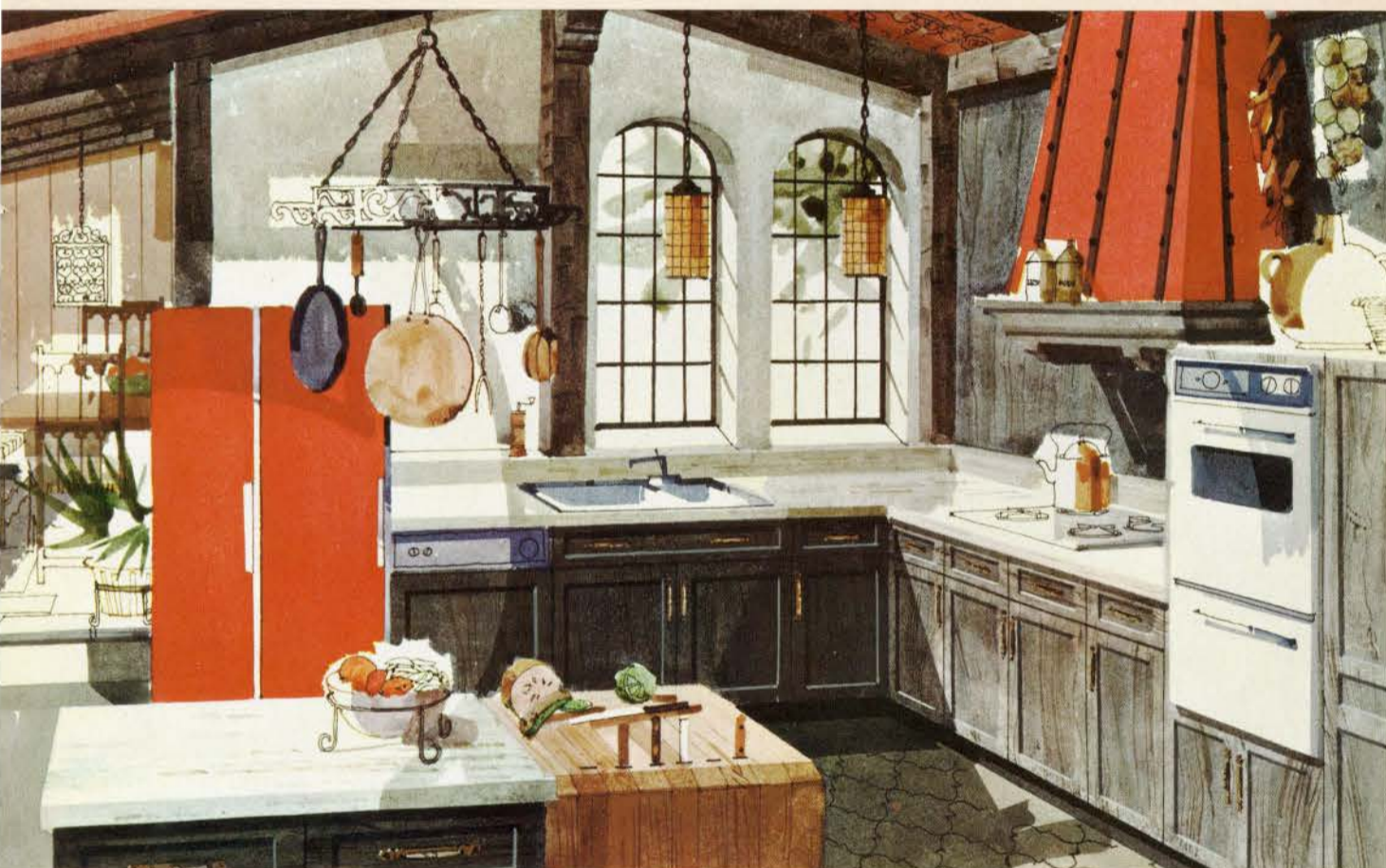
We have a duty now — to read Mr White's book before we start to work on hard-ware design. We will be suitably chastened and wiser, and we will be less likely to waste our client's money.

For Mr White paints a gloomy picture of frustrations and defeats, of vested interest, inertia and traditionalism. Mr White adopts the method of "case history" — selecting from among the many initiatives that lie between the industrial revolution and the Crystal Palace at the start, and the early '60's when he closed his files. He points out that the history of prefabrication is not logical and predictable, but reflects the actions of certain motivated individuals operating in a context over which they have inadequate influence.

Above all, Mr White stresses the inadequacy of the market in relation to the economics of industrial research, development and tooling, except for the most basic building products (which are already both prefabricated and industrialized).

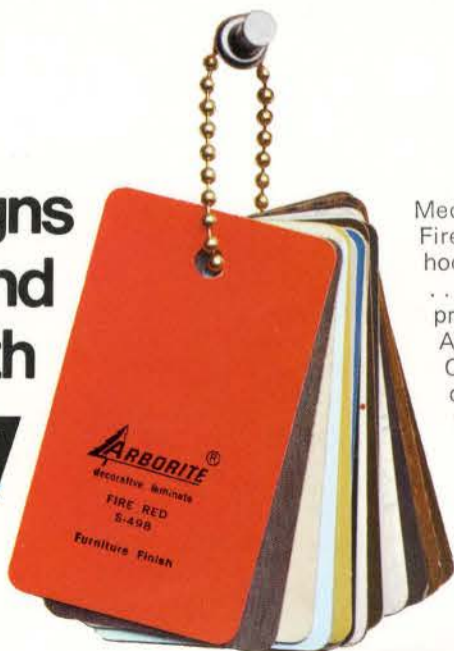
When we read Mr White's book, we will be alternately hostile to the world he describes and aggressive towards him for describing it so painstakingly; however, once we have assimilated his common themes we will be better qualified to practice in this new field for architects; prefabrication within the systems approach.

C. H. Davidson, Montreal.



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# Research Tour by Bus Around World



QUEBEC — Prof. Luc Durand, MIRAC, of Quebec, is going to spend the next five years of his life doing something which most

of us would very much like to but very, very seldom do — make a world tour by road.

“Après toutes ces expériences et à l’âge de 40 ans, je me suis aperçu combien l’architecture se cherche une définition. Je veux par un voyage autour du monde chercher une formule qui resitue l’architecture dans une optique plus précise” — Luc Durand.

Prof. Durand, associate director of l’Ecole d’Architecture, Université Laval, is taking a long leave of absence to engage in a research project which he describes as a synthesis of housing around the

world in connection with education in architecture. His mode of travel will be by bus, actually a large school bus which he is now converting into travel-living accommodation for himself, his wife Michele and four children, Marcel, 17, Luce, 16, Alain, 14 and Cristine, 7.

He plans to leave Montreal in October for Mexico and Panama, then travel to South America, visiting Buenos Aires and continuing south to Tierra del Fuego. He will then go to Brazil, via Peru, then back to North America and up the west coast to Alaska. From there he crosses the Pacific to Vladivostok and will visit Korea,



China, Japan, North Vietnam, Thailand, Malaysia, Ceylon, India (he practiced in New Delhi from 1959 to 1962), Pakistan, Afghanistan, USSR, Poland, Romania, Yugoslavia, Scandinavia and England. This he expects will take up the first three years, and he then plans to leave his children in Geneva (he attended the school of

architecture at the University of Geneva from 1951 to 1957 and practiced there from 1957 to 1959) while he and his wife tour Africa.

The research program will be recorded on files, tape and videotape.

Prof. Durand was associated with the Montreal architectural firm of Papineau, Gérin-Lajoie and Leblanc from 1962 to 1966 and with them won the competition for the Pavillon du Québec for Expo '67. He was afterwards with the firm of Gagnon, Archambault and Durand in Quebec, and in 1967 joined the staff of the Université Laval Ecole d’Architecture.

## Our new acoustical laboratory is dedicated to the sounds of silence.

Sounds coming through the wall and through the ceiling are pretty annoying. Whether they're in apartment buildings, office buildings or in schools. So Domtar built an acoustical laboratory. To help keep things quiet.

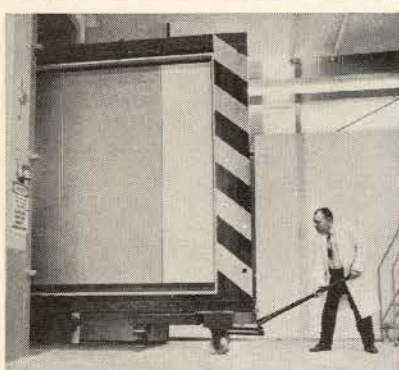
Our acoustical lab is an important part of the Domtar Research Centre. And since our laboratory was set up under the guidance of the National Research Council and meets the standards set by the American Society for Testing and Materials, all the sound transmission ratings we provide can be used by specification and building code authorities.

We created our lab primarily to test all the acoustic properties of our ceiling and wall products, both standard and new. And to allow us to experiment with new ideas, both our own and yours.

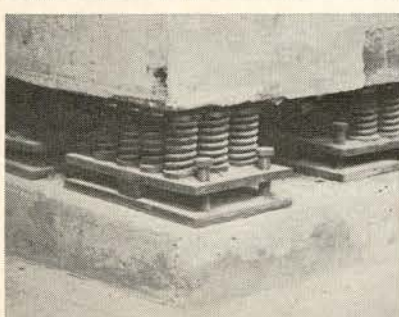
So, if the 'sounds of silence' is one of your pet projects, give us a call and we can try to make beautiful music together.



The heart of our lab is the Control Room. All functions of the lab are conducted from this room which, of course, contains the most modern sound measurement equipment available. Signals from the Control Room cause sound to be transmitted in regulated frequencies through the wall or ceiling assemblies being tested. The different sound pressure levels are then measured and recorded in the Control Room, to obtain the sound transmission loss.



An actual wall, built in this special testing frame, is installed between the Source Room and Receiving Room for sound transmission tests of walls. Floor and ceiling tests are carried out by building a floor/ceiling assembly between the Source Room and the Impact Room which is immediately above it. For sound absorption tests, the Receiving Room is used as a reverberation chamber.



The coils you see here are some of the 640 on which both the Source and Receiving Rooms rest. These coils are an important factor in minimizing any outside noise or vibration which might interfere with the critical measurements.

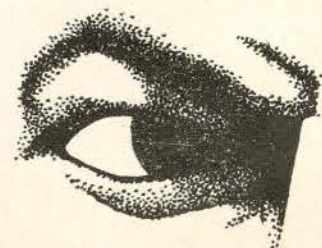
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## New Head Manitoba School

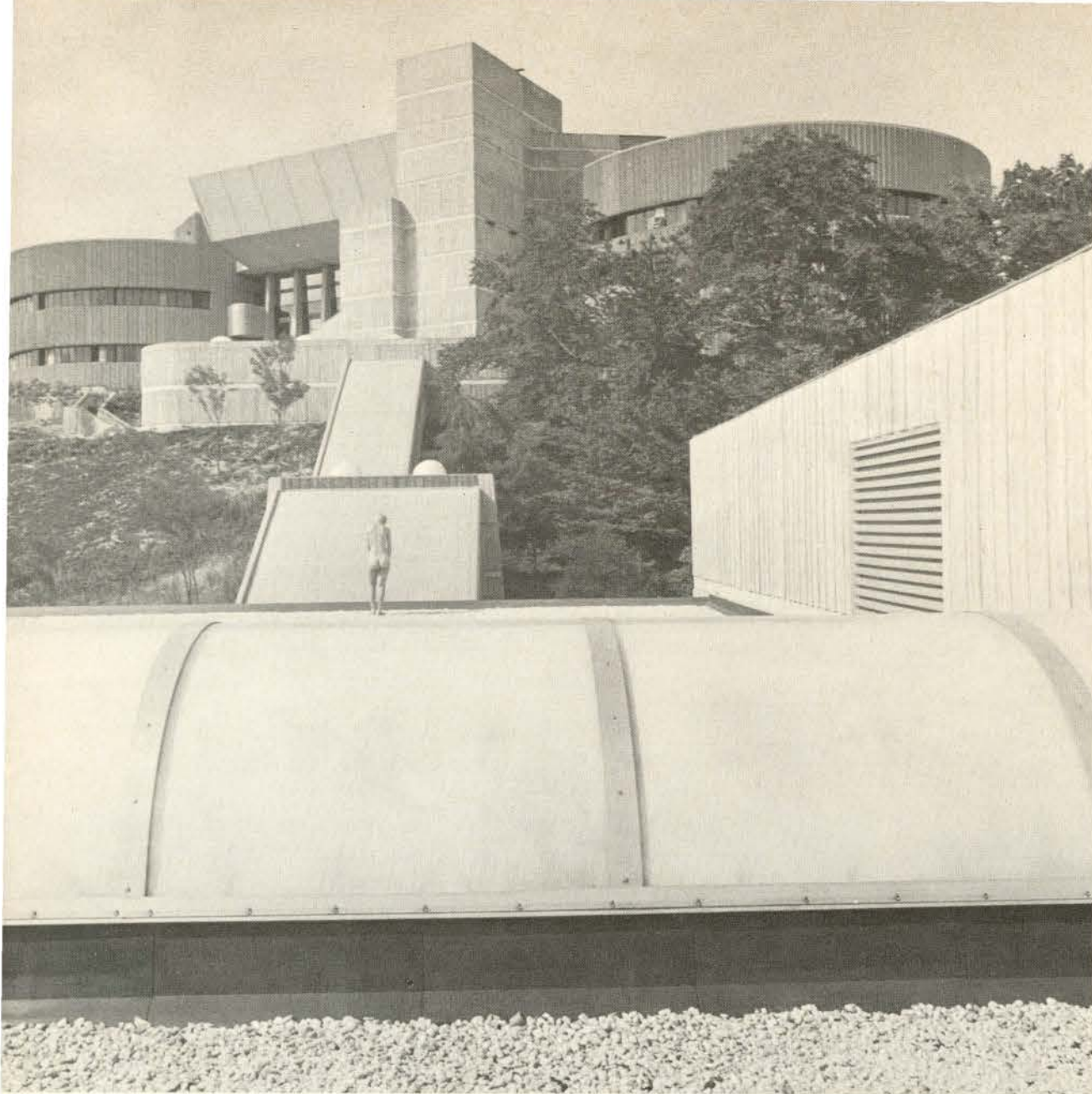


Kum-Chew Lye

Prof. Kum-Chew Lye, MRAIC, has been appointed head of the Department of Architecture of the Faculty of Architecture at the University of Manitoba. Prof. Lye, who was born in Malaysia, studied architecture in the USA and holds an MFA degree from Princeton University. He joined the staff of the Manitoba school in 1964. In addition to teaching, Prof. Lye is a partner in Team 2, the Winnipeg firm of architects and urban design consultants.



The cover photograph of the Ontario Science Centre and photographs in pages 13 to 16 are by Harry Barash, Montreal.



The Ontario Science Centre, officially (until the Act is changed) the Centennial Centre of Science and Technology of Ontario in North-eastern Metro Toronto, is another major Centennial project which, if it really matters, was not ready for opening during 1967 because it was not started soon enough. And, like the National Arts Centre in Ottawa, it was the object of a preliminary study, done before the architect was commissioned, which didn't provide a program and grossly underestimated what such an institution would cost.

The Centre, which opened in September, is the latest of the Province's cultural and educational facilities in the Toronto area (others are the Art Gallery of Ontario, the Royal Ontario Museum, the Archives and the Planetarium).

Because this is Canada's first science centre, we felt the project merited the attention of two or our architect-editors, A. J. Diamond for an architectural critique; and Alastair Grant on how he thinks the building will work.

We thought it would be interesting also to have the architect's own thoughts about how he dealt with the design problems, because obviously it was a great challenge — he didn't choose the site; he wasn't given a program and there was no precedent for this kind of an institution in Canada. There were also a lot of headaches during the five years of design and construction. The Centre has had three different Directors General, (design changes were made during the regime of the second); at times it was an unhappy job for the contractor, and he said so (there were five different contractor's project managers during the construction, two bankruptcies in major sub-trades, three changes in the electrical contractors and two in the mechanical). There were the usual comments about the

cost, flood control and conservation measures for the Don River Valley park section in which the Centre is located and other ancillary work considerably added to the cost of the whole project, but were not directly connected with the building as such.

Moriyama received the commission for the Ontario Science Centre in late August, 1964. It was the Ontario Government's Centennial project and the client wanted it to be ready for an official opening in 1967 — three years away. Moriyama hesitated to accept the commission.

"The Centre staff was just being formed; the concept of need was not defined; the physical requirements were non-existent; the basic idea had no precedent in Canada; the feasibility report by an independent firm suggested an impossible budget of \$10.00 per square foot."

There was no list of requirements on which to base a program, and time was short — eleven months from concept to design to working drawings. In the circumstances the Ontario Department of Public Works took the unusual step of permitting the architect to work directly with the staff of the Centre and their consultants.

Moriyama and his own staff took a cram course in museology which, for him, included a round-the-world research trip. Gradually the goals were defined.

"The Centre must express man's universal pursuit of knowledge and possibly understanding... the Centre must be a place for everyone, not cater to 12 specialists and ignore 12,000 others. It must be fun, arouse curiosity, be a place of wonder... it must be capable of quick change. When the only thing constant in a man made world is change, the "exhibit" must change 20 per cent a year — a five year cycle."



# ONTARIO SCIENCE CENTRE

## Credits

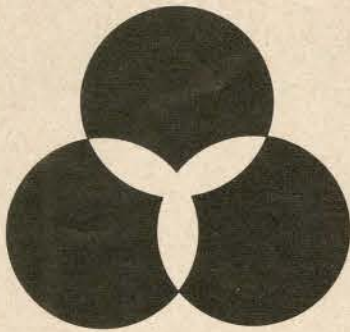
The Science Centre of Ontario (The Centennial Centre of Science and Technology).

Owner: Ontario Department of Public Works, Chief Architect, D. G. Creba, MRAIC.

Architect and Site Planner: Raymond Moriyama, MRAIC; Staff: Project Manager, David Vickers; Project Construction Manager, John V. Snell; Assistant Construction Manager, Thomas Motomochi; Design Co-ordinator, D. C. Cooper; Landscape, Bon W. Mueller; Interiors and Furniture, G. Ronning-Philip.

Consultants: structural, M. S. Yolles Associates; mechanical, Nicholas Fodor and Associates; electrical, Mulvey Engineering outside services and flood control, H. G. Acres and Company; soils, William Trow Associates; auditorium and lecture rooms acoustics, lighting and audio-visual, Reeve sound Company Inc.

General Contractor: Pigot Construction Co. Ltd.



### Centre Costs

Research proved the outside consultant's cost estimate of \$10.00 per square foot to be rather naive. Since there was no precedent in Canada, both client and architect did cost research in the United States and Europe. US sources said \$60.00 per square foot was minimal for a museum; from \$45.00 to \$50.00 was quoted in Europe.

"We asked for \$45.00 and received \$40.00 with 10% leeway — \$44. The building cost was actually about \$40.00 per square foot. Other costs included flood control work, site development, outside services, access roads and landscaping."

The total cost of the project to date, including flood control measures for the site and the park, landscaping, furniture, etc., (but not the exhibits) is given at \$26 million.

### Exhibit Areas

There are nine major exhibit areas in the Centre: Molecular Science, Hall of Life, Earth Science, Space Science, Canadian Resources, Hall of Communications, Hall of Engineering, Transportation and the Junior Museum. The latter is aimed specifically at elementary school level and the emphasis is on visitor participation, for fun and interest and to absorb some excess juvenile energy. Exhibits in this section have been under test with selected junior school groups for some time now.

### Centre Logo

"The Centre must be an aid or be a leader in welcoming the dawn of the scientific-humanistic era... its emphasis is on today, but it must be a bridge to tie the past, today and tomorrow..." symbolically, our ideal can be represented by three interlocking circles, representing man, science and nature... the fact that it appears like a trillium, the logo for the Province, is an interesting and definite plus..."

Designer Allan Flemming's symbol for the Centre is three interlocking circles in green, red and blue, with the three petals of the trillium, stylized, in white where the circles overlap. The colors were chosen because they make another "science exhibit" — when spun, the colors turn to white.

### Design Solution

The architect's design solution for the Science Centre is based on a seven-stage sequence of experience which in turn reflects the centre's functions and requirements and the nature of the site.

Moriyama says "we based the whole idea on the Japanese symbol for the heart, which is the essence of most classical composition in Japanese gardens, and translated it to fit our sequence of experience: opening, mundane, psychological break and introduction, statement, adjustment, back-up." (see diagram upper right)

Moriyama listed his involvement with the Centre as including:

- 180-acre Ernest Thompson Seton Park, in which Centre is located.
2. Master plan of the Centre.
3. Site development and flood control.
4. Architectural design and supervision of buildings.
5. Landscaping and exterior furnishing.
6. Architectural signs, interior and exterior.
7. Interior design of public areas including restaurants and board room.
8. Design of modular furniture.
9. Consultation on exhibits.

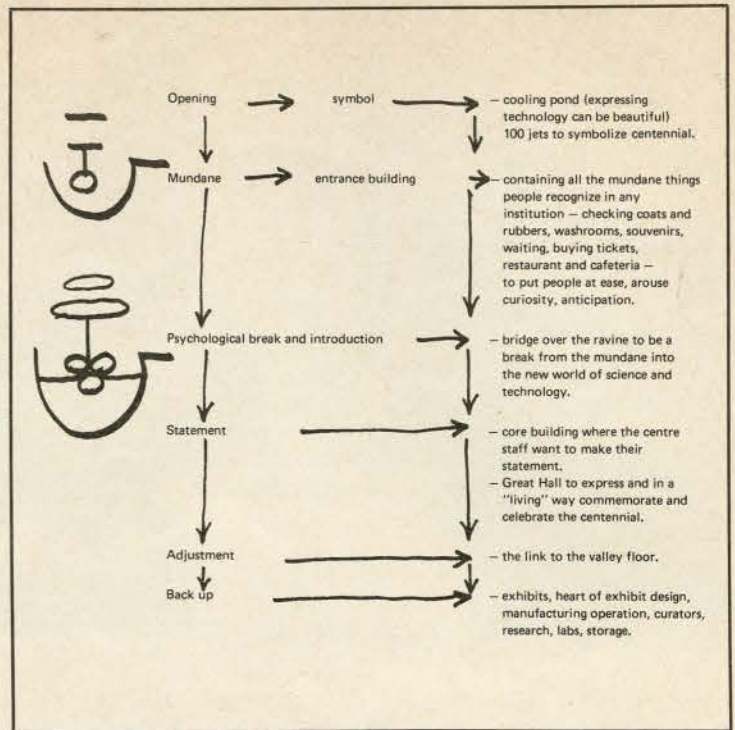
By January 1965 the basic requirements were agreed to, but the exhibits were not established. Ten days were left to conceive the plan.

"Mies talked about: 'less is more', Frank Lloyd Wright about: 'organic architecture', Yamasaki about: 'serenity and delight', but, for us, why not 'sex in architecture'.

It is more lasting. Since we're convinced the program and requirements will change, although we're given some assurance it will not, let's conceive the complex like a town, breaking it into units of recognizable scale capable of change in form, timing and emphasis. This way we can give a symbolic introduction, put the public at ease, and then arouse their curiosity and slowly unfold the complex, unit by unit. This may be an over-simplification, but it is possible, maybe valid, only with a difficult site like ours... The complex will be a "strip tease; never exposing all".

This approach seemed right because of:

1. Easier economic and cost control. The master plan could be cut off at any point, dictated by needs or the pocket book.
2. The project could expand at any time without affecting the operation.
3. Change in emphasis and timing is allowed for.



## Educational Role Stressed

by Alastair Grant MRAIC

Raymond Moriyama, architect for the Ontario Science Centre, has described the building not as an architectural solution but as an attempt to merge building design with museum display. Every part of what he has done is intended to contribute to this general purpose.

It was assumed from the start that this was not to be a museum in the traditional sense, a repository of objects for study by specialists. Rather it was to have a more active educational purpose, that of giving the general public

some appreciation of the scientific culture that exists around them and in which they spend the greater part of their daily lives.

The means by which it does this has been carefully developed. Visitors are surrounded by displays illustrating the origins and development of modern science, and are provided with working models that allow them to see for themselves how the application of general scientific principles affects their daily lives.

The building has been divided into three main parts, each per-

(Continued on page 16)

## DESIGN PRIORITIES QUESTIONED

By Jack Diamond, MRAIC

The Ontario Centennial Centre of Science and Technology has been divided into three separate structures, spread over a steeply graded and well wooded site. This decision, it would seem, was taken in order to distinguish what are ostensibly three separate categories of activity housed in the complex — arrival and all that that activity entails, lecture halls and other audio-visual media used to instruct or inform grouped and seated audiences, and halls for exhibits such as working models. The models can be manipulated by the spectator, the overall purpose of the institution being to make the intricacies and wonders of science and technology intelligible to a large public.

The observation of a completed building project does not always reveal the unsuccessful attempts that may have been made by the architect in winning the client to different or better results. Hard as it may seem, this cannot be a consideration in making judgments — it is only the final physical and operational result which can be considered. If, however, there are well-documented drawings that show other intentions, then these can be judged as a project. This is a different matter.

Therefore, while criticisms of the Centre of Science and Technology must be made, they may very well cover points of which the architect is well aware and which he may indeed have wished to incorporate in the design.



A criticism which was levelled at the design is the compartmentalization of activities; in truth the activities of rest, instruction, eating, exhibit participation cannot be separated in a simplistic way. The architect's rebuttal was that, in fact, these activities are distributed throughout the complex. The question then must be asked: Why has such a distinction between the three components been made?

The central building in the complex, which contains the lecture halls, was intended as an "orientation center".

It now performs a somewhat different function but, one suspects, the design was not changed when the original purpose was altered. The design in this area, as a consequence, lacks conviction; the large hall does not appear to satisfy any particular need in that location, other than "architectural articulation".

The Centre is the most forceful demonstration of the dichotomy between the status of science and technology on the one hand and that of architecture on the other. This is seen by studying the exhibits and their housing. The mechanisms on exhibition display economy of means, of husbanded energy, of elegance borne of necessity, whereas the architecture uses archaically heavy means of support and enclosure, and whimsical forms. These seem to be the product of a 6B pencil sketch, and not of the process of fabrication or engineering, or a

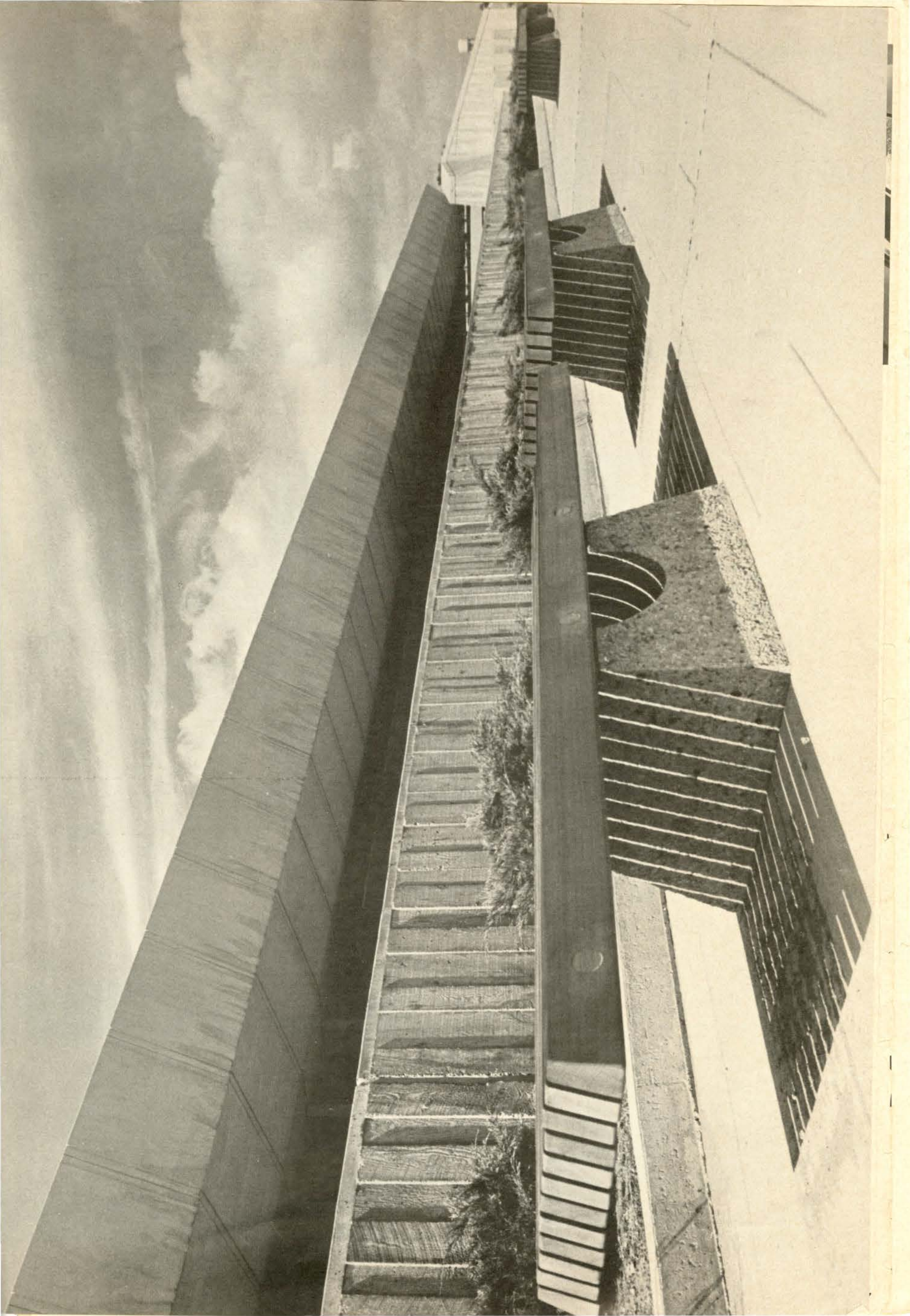
consideration of the ratio of weight to enclosure, or of fabrication process, or of labor saving in construction. Further, the mechanical systems which we now actually use, and which distinguish our architecture from that of our forebears, are nowhere in evidence except, ironically, as displayed in a special room as an exhibit! It is as if IBM were to display their products in a medieval castle. It is also curious to observe the use of monumental, concrete forms in the entrance hall and central theatre building (which, for all its "articulation" conceals the lecture theatre volumes) contrasted with the light weight structure (steel frame and metal cladding) which houses the exhibits, and which blacks out with paint its structure and mechanical systems. Is there some significance here? Does it mean a real disdain for technology? The argument that the building should not detract from the exhibits is plainly, in this case, no argument at all, as this would mean only one exhibit should be in a space, and there are many, or it is an admission that the two artifacts cannot be handled in conjunction with one another.

The desire for strong enclosure might indeed be a valid one. However, castle walls are not exactly part of our means and time. There are, however, ways of achieving this end result with more appropriate means — corrugation is a structural means of achieving strength with a thin sheet. So can

rooms with their walls make, in effect, a deep and useful wall, the depth of the "hollow wall" being the room itself.

Perhaps the technological device which has most altered our lives and should, consequently, alter our architecture and planning, is the automobile. One would have expected that this building would have demonstrated how we might best use and accommodate this device. Instead, the car is placed on the conventional black top parking lot, and separated from the building by a water and fountain display. Like Scarborough College, which makes a great thing of protecting the pedestrian in the Canadian climate — that is once he enters the building — it leaves him to his own devices for survival before he enters the hallowed halls. The automobile is still not dealt with as a technological reality, but as a somehow second class issue, and that in aesthetic terms.

Evidently there was no program for this project. While this places a burden on the architect, it in turn allows him to set the priorities for expenditure. Thus it is not unreasonable to question these. To have spent a great deal on concrete fustiness instead of designing a light-weight structure which might have allowed some of the budget for, say, a parking structure integrated with the building as Malton airport has done, must call the design priorities into question.

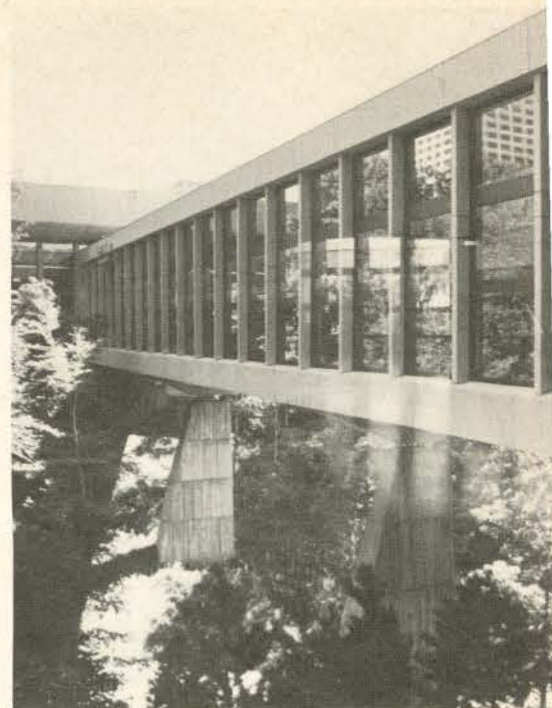




Second level entrance area



Assembly area



Bridge connecting reception and orientation buildings

(Continued from page 14)

forming a separate function; reception, orientation and display. The simple arrangement of these three parts, linked by passageways, is clearly recognizable on the site plan.

Future additions will be to the display areas only. In due course, this part of the building will be extended further north and another connector to the orientation centre will permit continuous movement through the exhibitions without doubling back.

The master plan envisages a total complex of 1,200,000 square feet, with eight phases in all. The three phases built to date account for 500,000 square feet. Concrete has been used as the main material throughout the centre, with aggregates obtained locally. All permanent and fixed parts of the building are in natural materials. Color is used only on impermanent items — carpets, furniture and exhibits.

Part of a 180 acre Don River conservation area, the site has only a small plateau, about 10 acres in extent, at the top near the road. This was too small to accommodate the entire building and other parts of the site have had to be used as well.

From the plateau, steep slopes fall away to the Don River Valley below. The master plan for the Centre was extended to include flood control measures along two miles of the river. This has been incorporated in the general landscaping of the site itself and Ernest Thompson Seton park to the north.

The reception area of the Centre may be entered at two levels. Those arriving by car use the upper level; others arriving by bus, including school children, will be left at the lower level.

In front of the reception building is a lake with a hundred jets. Additional low fountains serve the needs of the air handling system.

The reception building provides areas necessary for arrival and departure: ticket counters, coat racks and souvenir stands. Brightly colored assembly areas familiarize student groups with the system of color coding followed in the building.

The reception building also contains a restaurant with an outdoor licenced annex and the boiler house, which has been opened to view across a breeze-way.

A long bridge connects the reception and orientation buildings. From it the view is carefully controlled and only the landscaped hillside to the north can be seen.

The orientation building con-

sists of three towers and a large hall. Two of the towers contain lecture theatres that accommodate groups of different sizes. These will be used to introduce visitors to the world of science and technology. Here will begin the unfolding of the story that is told later in the exhibits themselves.

A portion of the second tower and the third tower are used for administration and design space by the staff of the Centre itself. The large hall between the towers will eventually accommodate a working computer which will not, however, be ready when the building opens.

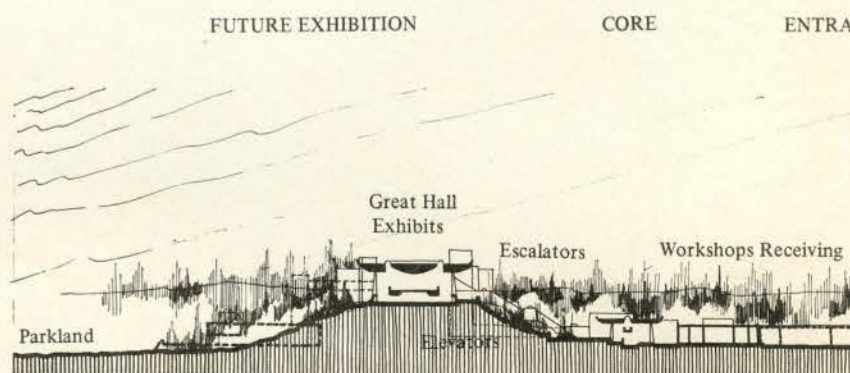
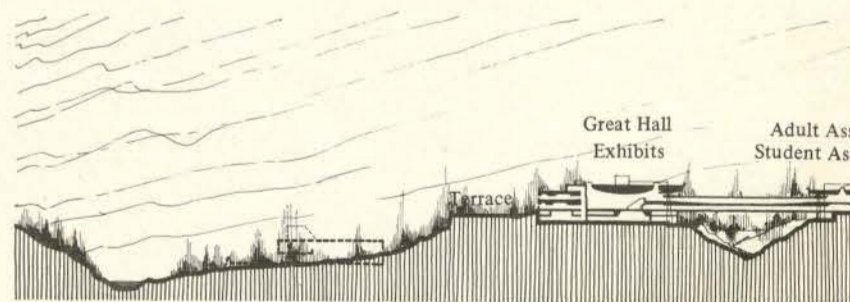
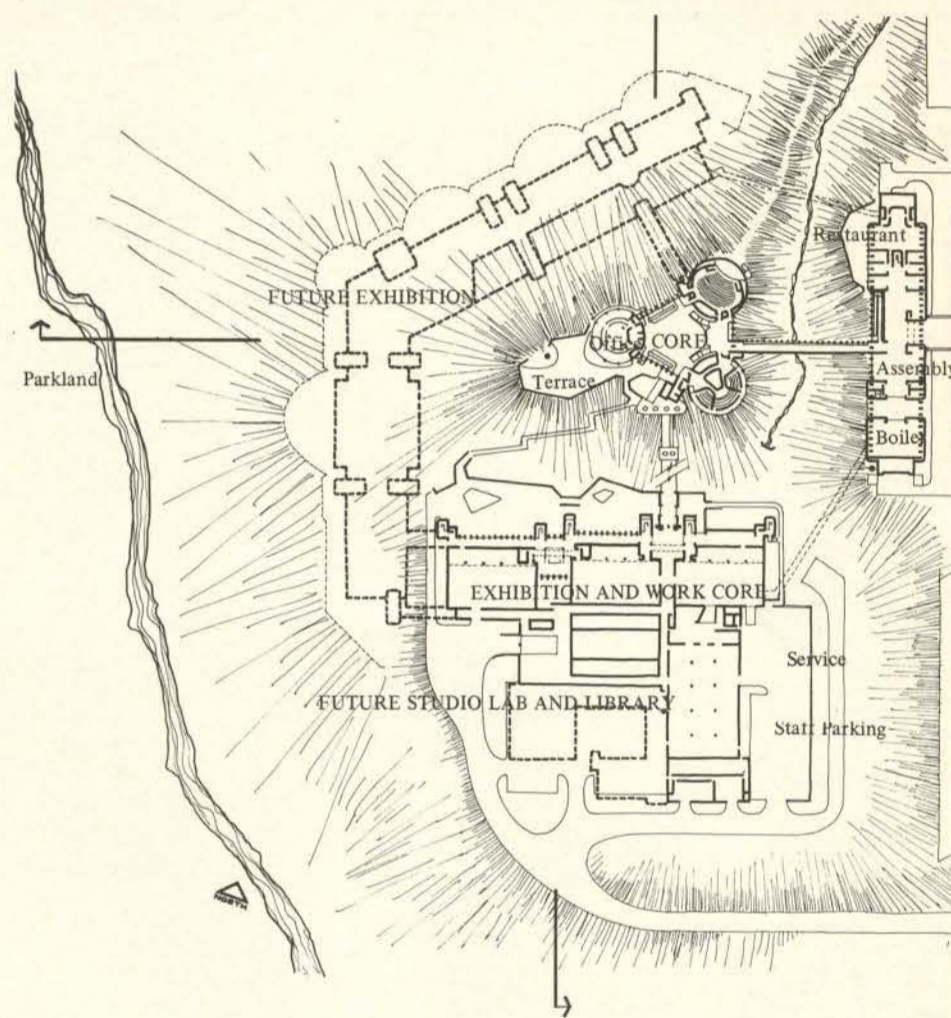
The third section of the Centre contains the exhibits themselves. This building is at the bottom of the hill and is reached by a bank of escalators from the orientation building.

It is in this part of the Centre that the architect's intention of subduing the building to the requirements of museum display is most consistently interpreted. The interiors are entirely painted out and the exhibits are allowed to do their work without irrelevant architectural distractions. A lighting grid overhead allows complete flexibility for display and the two-story space gives sufficient height for exhibits of large size.

To be successful, however, this approach to design demands of the exhibition staff great sensitivity in their use of the building. Generally speaking, the exhibits are of a very high standard. It is unfortunate, however, that in many cases they appear to have been placed with no thought for the traffic patterns they create. This is most obvious at the very entrance to the exhibition hall where, at the bottom of the bank of escalators from the orientation centre, a model of a 19th-century brick kiln is set right across the main path into the room.

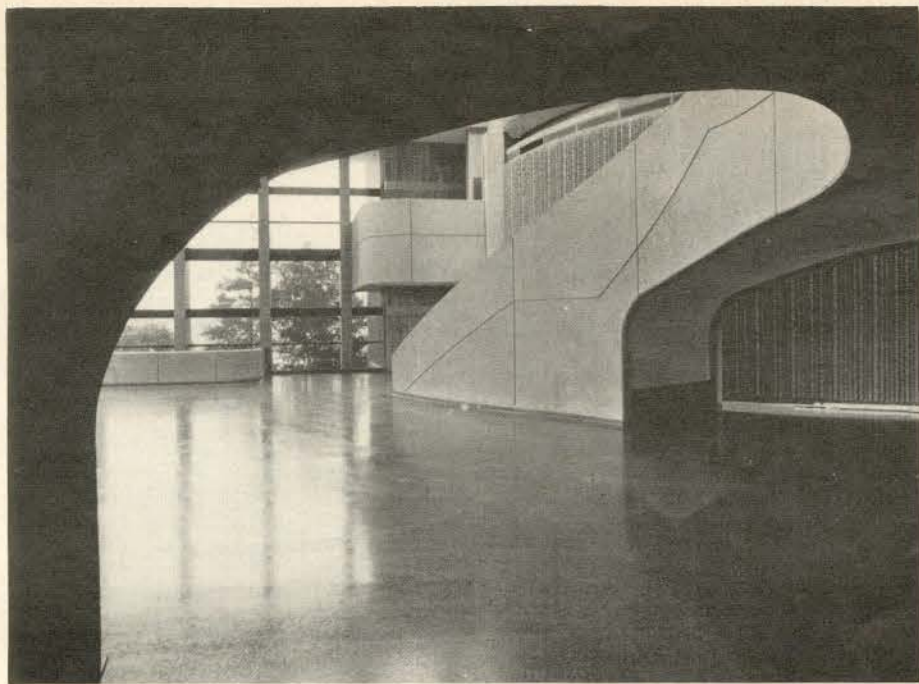
This and other similar mistakes were made during the term of office of the Centre's second director and altered the architect's original intention; they can be corrected as the building is lived in. Fortunately the space provided has the potential for this kind of endless rearrangement.

The success of the Centre as a whole ultimately will depend more on the exhibits it contains than on its purely architectural qualities. It is to the architect's credit that he has realized this and has produced a building that will respond to the unusual and exciting demands that will be made upon it.



FUTURE EXHIBITION CORE EXHIBITION AND WORK CORE FUTURE

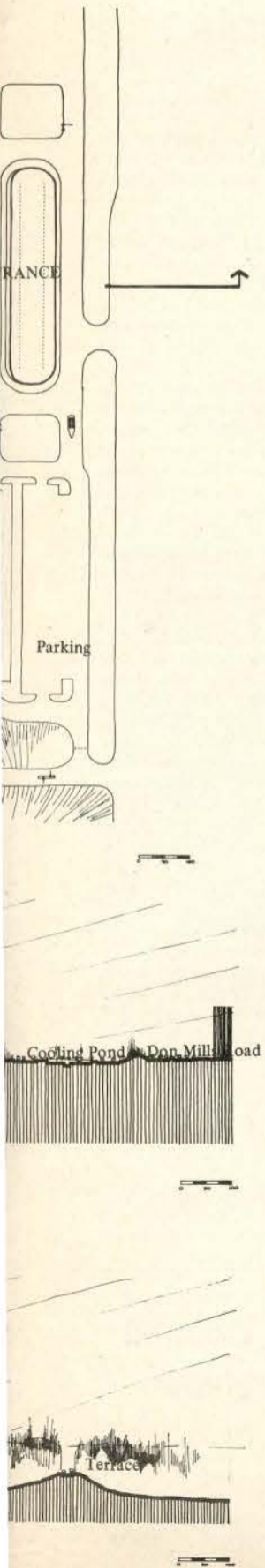




Orientation building



Escalators from orientation to exhibit area



"Cordridge", carpet by Armstrong.

# The people at McGill knew what they were doing when they put down carpeting of Du Pont Nylon.

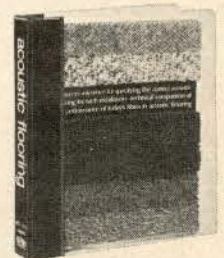
## Keeping things quiet.

The McLennan Library at Montreal's McGill University is one of the busier spots on campus. As well as a research centre and study room, the new library also serves as a meeting place for students and faculty members. When the floor finish was initially selected, carpeting was recommended by the architect because of its unique sound absorption characteristics.

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## CYCLING UP A VISION!!!



One of many excellent spectator-manipulated exhibits at Ontario Science Center, this one involving the generation of power with a bicycle

# Five-point Plan Urges Interdisciplinary Research

OTTAWA — Establishment of an interdisciplinary program of environmental studies at the national level is recommended in a brief presented to the Senate Special Committee on Science Policy by Dr Thomas Howarth FRAIC, on behalf of the Royal Architectural Institute of Canada.

The brief contains five recommendations about the role of the professions concerned with the environment and the universities:

1. That as a matter of immediate urgency a Special Committee be set up by the Federal Government to investigate, with the collaboration of national professional bodies and Canadian Universities the possibility of establishing an interdisciplinary program of environmental studies at national level.

2. That interdisciplinary task

forces, or working parties be formed as soon as possible and preferably on a regional rather than on a provincial basis, to advise the proposed Special Committee.

3. That one of the first responsibilities of the Special Committee and its task forces should be an assessment of the research potential of the Universities of Canada with a view to establishing a hierarchy of centres and sub-centres where effective work in the environmental field could be done and new lines and methods of communications be developed without necessarily conforming with existing patterns.

4. That notwithstanding the establishment of the Special Committee, ways and means be found of providing substantial financial

resources for the development of interdisciplinary research in the environmental field.

5. That architecture be recognized as one of the basic disciplines relating to environmental studies and that the Royal Architectural Institute of Canada and the University Faculties and Schools of Architecture and Environmental Design be represented on the Special Committee and on such policy forming bodies, work parties, task forces and research projects as may be established by the Special Committee.

## SCA Gives Awards to Schools

Awards of \$2,500 each for 1969/70 have been made to two Canadian Schools of Architecture in the Canadian Structural Clay Association's new annual awards program.

The program is set up so that two grants of \$2,500 each will be presented annually for the next five years to Schools undertaking research projects aimed at increasing architectural knowledge and aiding the advancement of the profession.

Schools of Architecture to receive awards this year are at the University of Waterloo, where they are using the grant to study the application of the computer in architecture, and at the Nova Scotia Technical College where they will focus on the development of a new approach to architectural education. The University of Waterloo Audio Visual Department is making a film presentation of Waterloo's study which will be made available to all provincial associations in the spring.

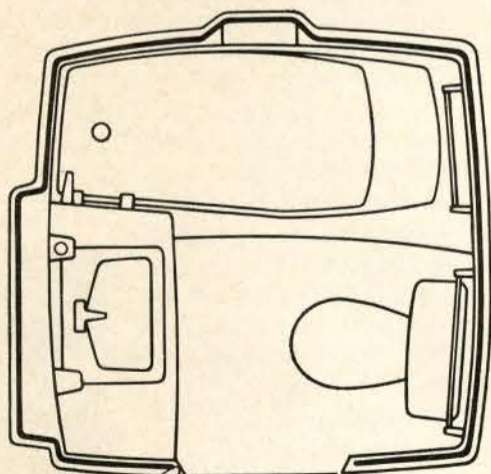
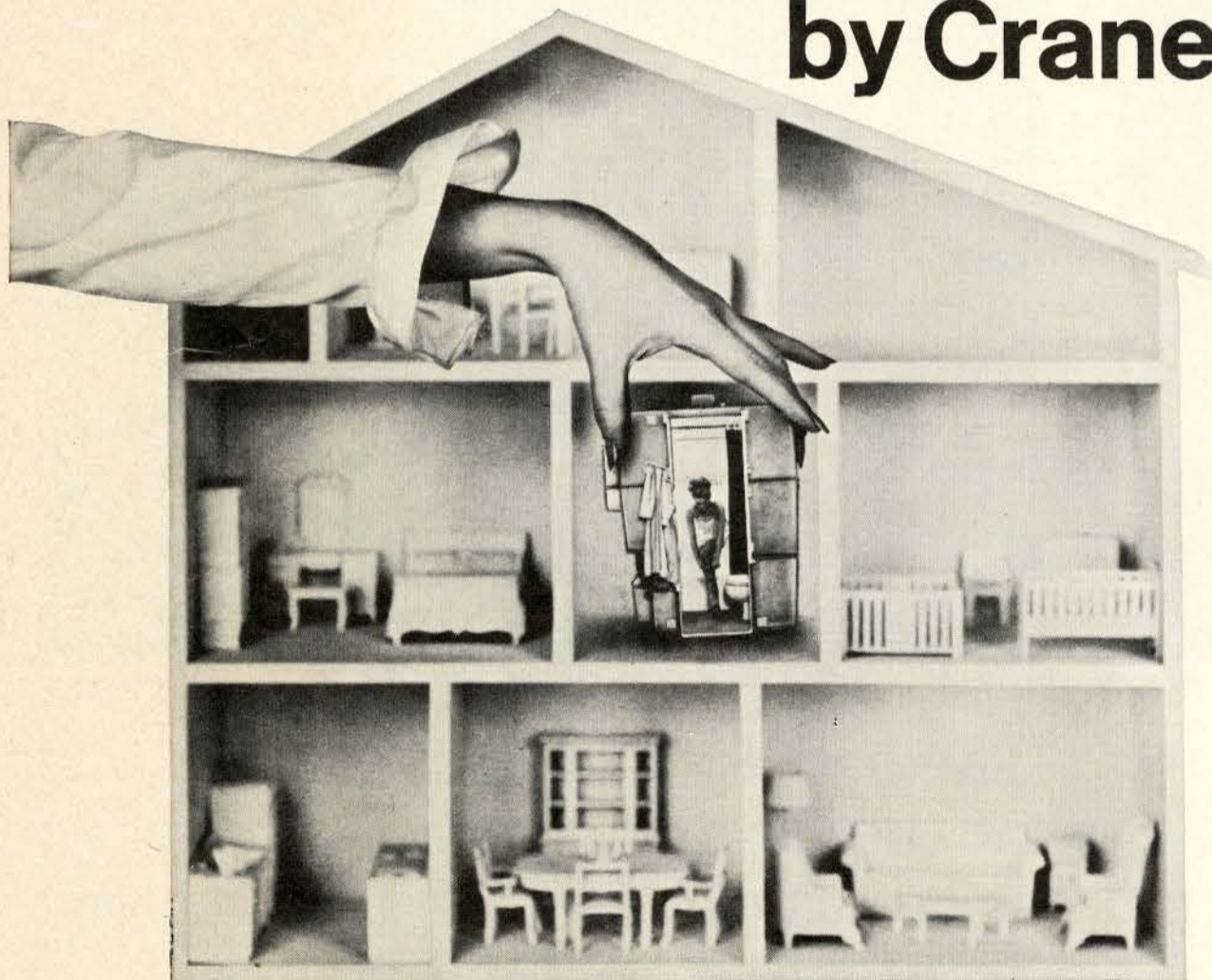
The selection of the Schools to receive awards for a particular year is made by the Schools themselves through the Canadian Conference of University Schools of Architecture. The projects themselves may be initiated at the Schools by a staff member, a team of staff members or students or even by an entire class. Each Canadian School of Architecture will have received one grant by the end of the five year term.

Three Toronto architects will form a Review Committee which will be responsible for approving initiated projects, and for determining their successful completion. Dr Thomas Howarth, (F) represents the Canadian Conference of University Schools of Architecture, R. E. Briggs, (F), the architectural profession at large and George Gibson, (F), the Canadian Structural Clay Association.

## Design Council Scholarships

OTTAWA — The National Design Council has awarded a record number of 43 scholarships and grants in its continuous program to upgrade Canadian industrial design capabilities and technology.

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# Seminar Centres on New Towns

by George Hume, B.Arch, MRAIC  
July 17, 1969

In spite of the title, the opinion at the end of this year's Stratford Seminar seemed to be that we need better towns, both new and old, and no amount of philosophizing will produce them unless it is accompanied by appropriate action. Anthony Adamson, in a luncheon talk titled "Repent what is past, Avoid what is to come", (Hamlet, Act III Sc.4), caught the flavor of the discussions when he remarked that one of the earlier titles he had considered was "Once more into the breach, dear friends, once more", (Henry V, Act III Sc. 1).

Dimitri Dimakopoulos had, early in the proceedings, lamented the fact that we are floundering when confronted with the problems of the New Towns. All the technological resources are available, he said, but we are not yet able to predetermine the type of life in them. Dean Thomas Howarth echoed these thoughts in his summary but argued that we must not allow the fear of making mistakes to prolong our inaction. We must learn how to design for change, he said, so that we can prepare for a future in which change will be even more frequent and encompassing than at present.

Thus, the anticipation of a few days in the relaxing atmosphere of Stratford proved to be only a minor highlight between the deliberations into the theoretical and practical spheres of city building. Despite the abundance of seemingly inescapable conference clichés, the captive Cabinet Minister who escapes after the opening ceremonies, the guest speakers who send last minute regrets and the slide shows in surroundings never intended for the purpose, the affair was stimulating and the participants left for home with a number of ideas to ponder.



Anthony Adamson (F)

Dr Paul Ylvisaker, Commissioner of Urban Affairs for the State of New Jersey (angels would fear to tread into an office so titled) managed to convey a feeling of optimism during the opening panel discussion even while implying that if incrementalism doesn't defeat us, then the sewage problems will. He felt that after two years on his job he was beginning a few positive steps to overcome some of the conflicting interests, opinions and land uses in his state.

Toronto's buoyant economy is carrying a major part of the rest of the country, Jane Jacobs commented as she refocused the thoughts of the same discussion. She called for more attention to making new poles of attraction in the country, like Halifax or Winnipeg for instance, to reduce the pressure and dependence on the overcrowded centres.

Richard Rohmer answered her call with a presentation of the ideas leading to the Mid-Canada

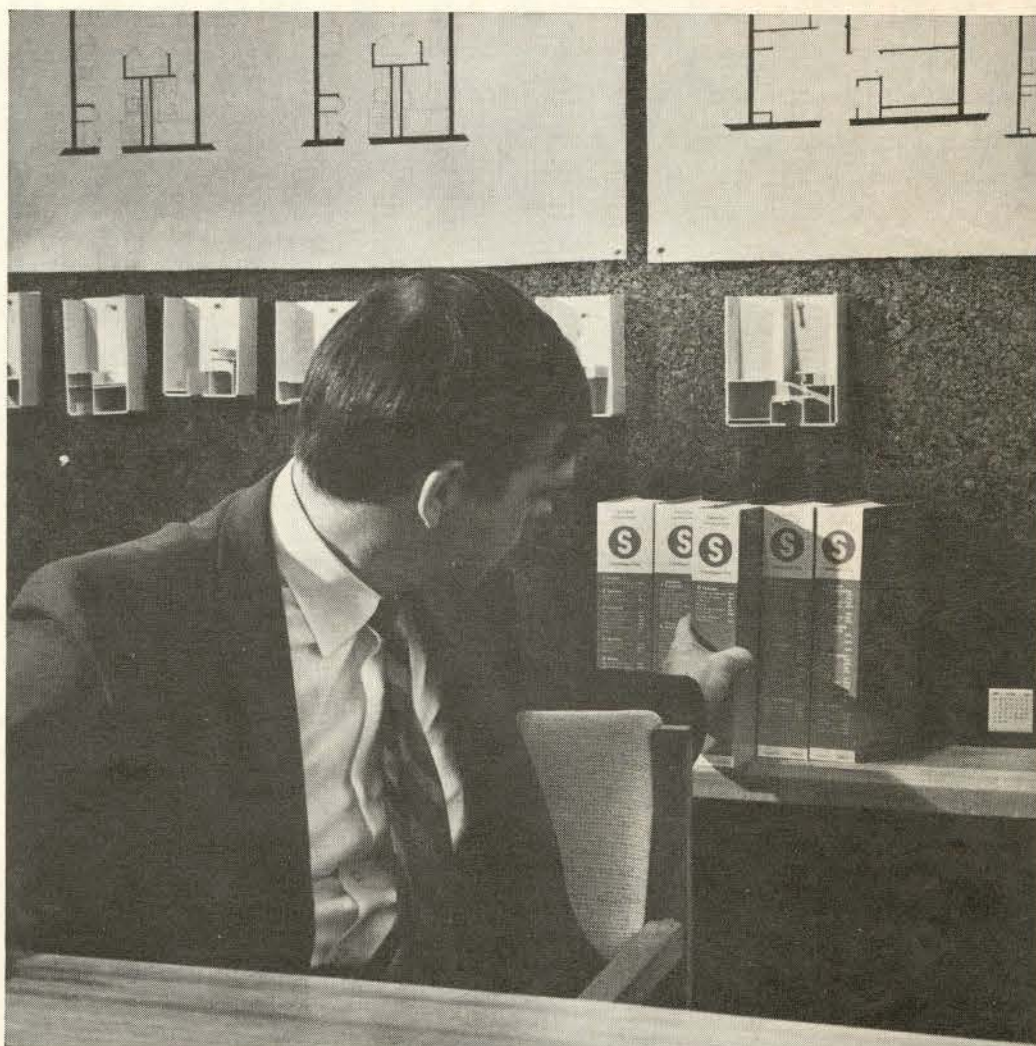
Development Corridor Conference (See page 5). Like Morton Hoppenfeld, who presented the Rouse Company's development of Columbia, Maryland, Mr Rohmer succeeded in impressing even those who came to scoff, if not altogether allaying their fears. Both men made the point that their initial physical concepts were useful mainly in arousing interest. The developments, they felt, would stand or fall on their "software", the effectiveness of the social and economic planning, rather than the attractiveness of the proposals.

Dean Howarth summed up this approach when he pointed out that even the best ideas remain just ideas until they are "sold" in the market. This proposition, along with its two examples, may provide the latest edition of the Stratford Seminar with more influence than the program committee could have hoped for.



Thomas Howarth (F), Humphrey Carver and Jane Jacobs at Stratford Seminar, July 6-8 at the Victoria Inn

## This architect took 11.6 seconds to find facing systems



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**Steel Cable List**

A new 28-page bibliography of literature on structural applications of steel cables has been compiled by the Graduate Division of Civil Engineering at the University of Pennsylvania, under the sponsorship of American Iron and

Steel Institute, Committee of Rod and Drawn Wire Producers. Write the above committee, c/o American Iron and Steel Institute, 150 East 42nd Street, New York, N.Y. 10017.

**Executive Sandbox**



Hugh Spencer's illuminated sand table or "executive's sandbox" for home or office is now being marketed by Birchall, Goad

Company. Sculpted tools by Barry Harvey are an optional extra. Pan-Am will fly in custom sand of your choice from such places as Casablanca, Normandy or Burma at \$100 per load although four bags of complimentary white silica sand are supplied. Dimensions 42x42x15. Price approximately \$500 retail. *Birchall, Goad Company Limited, 401 Bay Street, Suite 2314, Toronto, Ontario.*

**Cominco Brochure**

A new brochure from Cominco describes their two new zinc-based extrusion alloys which offer greater flexibility and scope in extrusion application. The brochure contains technical data, specifications and examples of recommended uses for extruded zinc. Write *Cominco Ltd., Sheridan Park, Ont.*

**Marimekko Textiles**



A wide range of designs (similar to the one shown above) from

the Marimekko Architectural Textile collection is being made available to contract buyers and specifiers throughout Canada. *Karelia International, 67 Front Street E., Toronto 1, Ont.*

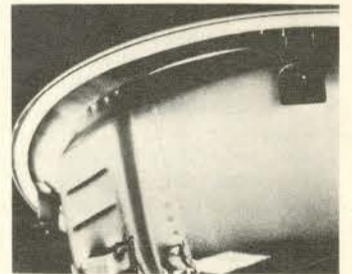
**Polydet Products**

A new publication entitled "Polydet International" describes Polydet's fiberglass reinforced plastic products and their applications. For information contact *Graham Products Limited, manufacturers of excelite reinforced plastics, Inglewood, Ontario.*

**Anti-Static Carpet**

Commercial Carpet Corporation, New York, has recently added anti-static carpets for hospitals and nursing homes to their Medicarpet series. Made of acrylic yarn blended with Brunsmet stainless-steel fibers with built-in cushion. Reduces static generation below normal threshold of human sensitivity. *Commercial Carpet Corporation, 10 West 33rd Street, New York, N.Y. 10001.*

**New Wash-Basin**



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**Concrete Finishing Aid**

Master Builders announces a new product, Confilm, which eliminates or minimizes problems caused by wind, heat and dryness in concrete finishing. Liquid Confilm, when sprayed over concrete immediately after screeding, reduces evaporation from the plastic surface up to 80%. Information sheet, CF-1, giving data on the application and effects, is obtainable free from *The Master Builders Company, Ltd., Toronto 15, Ontario.*

**New Waffle Pans**

Brunswick of Canada Limited has recently announced their entry into the manufacturing of fibre glass waffle pans for building construction. Initially Brunswick will produce several standard sizes, with larger sizes to follow. These products can be purchased or leased or rented through *Barclay Livingstone, Brunswick of Canada Limited, Mississauga, Ontario.*

# Make room for us on the ground floor.

As of right now we'll no longer be making door-to-door deliveries of mail in new or remodelled high rise apartment buildings.

Deliveries will be made to a central point. Either to an apartment group mail box or a central mail room located near the main entrance on the ground floor level.

So keep us in mind when designing or remodelling your next high rise building. Make room for us on the ground floor.



## Roll-Form Sealant

Insil Division of Sellotape Canada Limited is now supplying "Insil-Glaze", a pressure-sensitive PVC sealant in roll form, for aluminum, stainless steel or wood sash windows. Modified forms are also available for specialized glazing requirements. Brochure obtainable from *Insil Division of Sellotape Canada Limited, 10 Esandar Drive, Toronto, Ontario.*



## New Exit Lighting

A new Rotaflex of Canada range of exit lighting has just been announced. The series, only 1-3/4" wide and constructed of aluminum is supplied with stencil or fiberglass face. One standard unit covers all directional requirements. Each unit contains a diode rectifier, lamps and a die cast canopy. For particulars contact *Rotaflex of Canada Ltd., 609 King St. W., Toronto, Ontario.*

## CGE New Bulletin

Canadian General Electric has released a new bulletin (No.5526) on electric hot water boilers for industrial and commercial use. The boilers described are both the closed and open system type. Copies are available from CGE Supply Sales Departments or Industrial Heating Section, 214 King St. W., Toronto, Ontario.

## 24-hour Clock

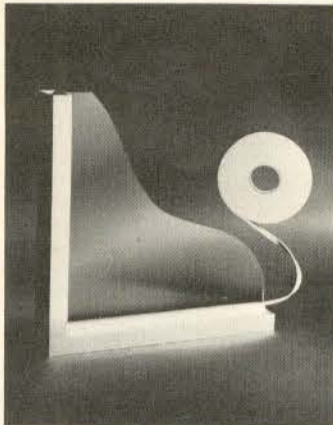
Edwards of Canada has introduced a plug-in clock with a 24-hour dial to assist easy conversion to the new nomenclature. A face design which conforms to the Ontario Hospital Services Commission requirements is available in this range. *Edwards of Canada, P.O. Box 430, Owen Sound, Ontario.*

## NEW ECONOMY WATER COOLER

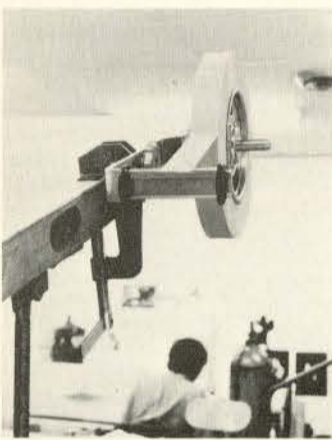
*New OASIS COMPACT On-A-Wall Water Cooler provides economy in both space and budget... plus the quality you take for granted with OASIS products. Only 16" high, 17" wide, 13 3/8" deep, yet it's a completely self-contained cooling system. Capacity of 3- and 5-gph. Polished stainless steel top; choice of decorator cabinet finishes.*

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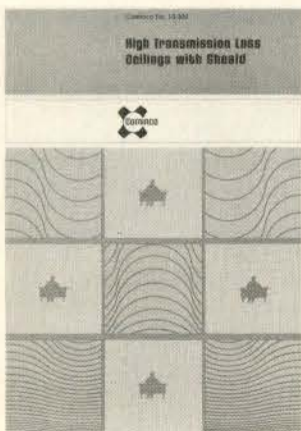


## Clamp Tape Dispenser



New from Sellotape Canada is a tape dispenser which clamps on to desk, drawing board or shelf and is adjustable through 12 dispensing positions. Works equally well for either right- or left-handed service. Any pressure sensitive tape up to 2" fits. *Sellotape Canada Limited, 10 Esandar Drive, Toronto, Ontario.*

## Shield Ceilings



Cominco has released a new brochure on how to solve the problem of isolating noise from mechanical rooms through the use of their cast, thin-lead sheet, Sheald. High transmission loss ceilings are illustrated and appropriate installation procedures and specifications are included. *Cominco Ltd., 630 Dorchester West, Montreal 101, P.Q.*

## Which of these quality-engineered products can solve a troublesome problem for you?

### Sealant Adheres To Concrete, Mortar.

Dow Corning® 780 building sealant is totally acid-free. Hence, this silicone rubber sealant will neither corrode calcite-based substrates during cure, nor support chemical reactions that impair adhesion.

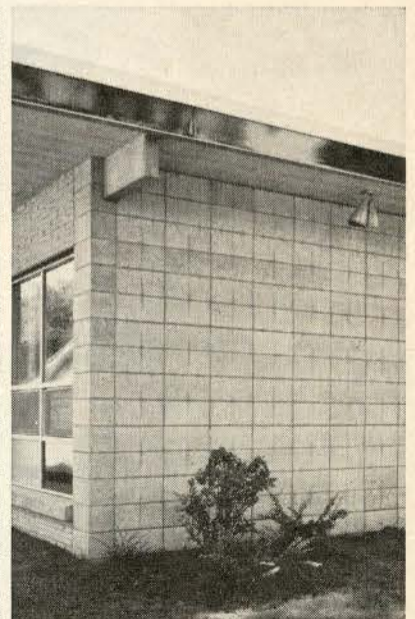
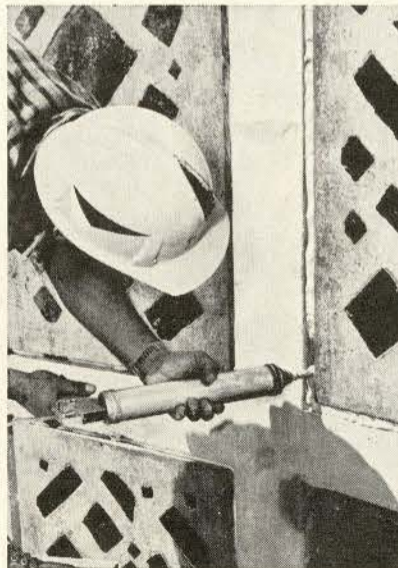
Dow Corning 780 building sealant is the most durable of all flexible construction sealants for joints subject to expansion and contraction of commonly used building materials. Request "Dow Corning 780 building sealant".

### Avoid Soiling, Discoloration

by specifying a brick that is factory treated with Silaneal® water repellent. *Silaneal water repellent keeps bricks clean* Applied by the brick manufacturer, it protects the natural beauty of brick in storage, in transit, at the job site and in the wall. The protection it affords is essential—especially on porous, light colored brick. The long-lasting protection also shields brick walls against infiltration by moisture and water, prevents unsightly efflorescence and helps keep walls dry. Request "Silaneal Water Repellent".

### Keep Water Out

of masonry walls by having your waterproofing contractor apply above-grade Silicone Masonry Water Repellent made with Dow Corning silicones. A single application forms a water barrier up to 3/16 inch in depth, prevents damaging freeze-thaw cycling, staining and discoloration by smoke, soot, dust, dirt or splashes. The invisible, in-depth protection lasts 5 to 10 years. Effective on precast and poured concrete, concrete block, brick, mortar, sandstone, stucco, terrazzo, and other porous masonry. Request "Silicone Masonry Water Repellent".



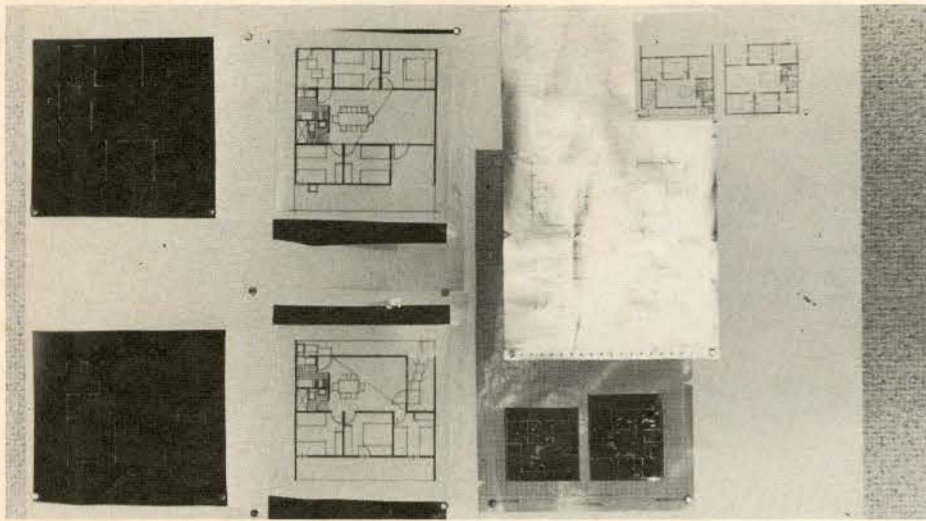
**Specify Dow Corning Building Products**

# DOW CORNING

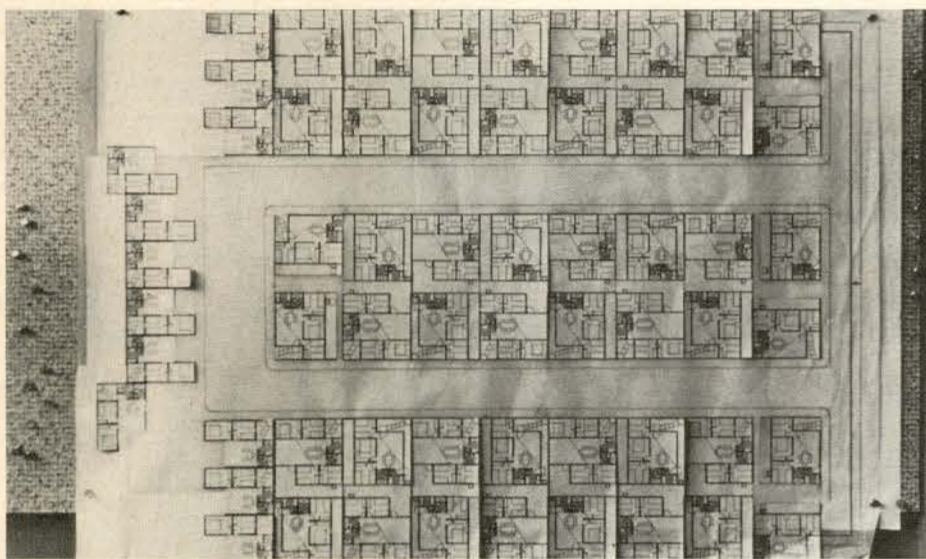


1 Tippet Road, Downsview, Ontario

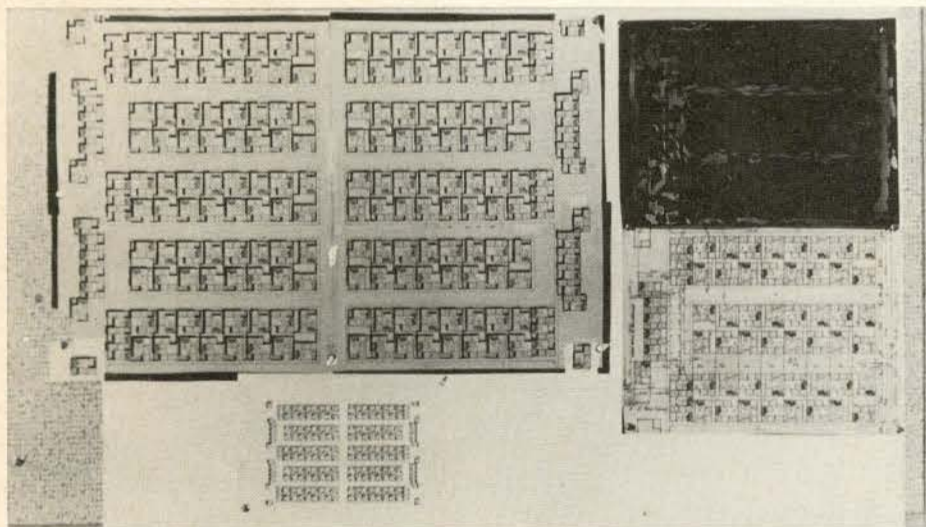
11-69



Three different house plans were designed at 1/2" scale and reduced to 1/8" scale. Above, right is an offset plate and plan at 1/8" scale



.....Plans at 1/8" scale combined to form neighborhood blocks



.....which were reduced to 1/24" scale. Four prints were then combined into larger neighborhoods. Shown above right is a negative at 1/24" with positive below. On the left is an assembly at 1/24", below it the neighborhood at 1/80" scale.



.....The 1/80" scale plans were assembled on a base map and reduced to 1/200". Above is a close-up of plan at 1/200" scale

# Focus on System Designing



One of the basic rules in California architect Ned H. Abrams' office is **Never draw anything twice, never allow anyone in the office to draw anything twice and, more important, never allow consultants to draw anything which can be drawn in the office more intelligently, more quickly or more professionally.**

Mr Abrams feels that the practice of drawing and re-drawing identical elements of buildings and site plans is truly archaic, and if the problem of survival vis-a-vis the industrial complex is to be realized, architectural practice today *must* use advanced procedures and new techniques.

### Beginnings of the System

Abrams began streamlining his practice in 1948 when he acquired a client who constructed and franchised factory-built homes called "Mobil-Homes". These structures, were to be completely constructed and ready for occupancy in 14 days. Almost immediately problems arose from the delay in processing approvals. To alleviate this delay Abrams suggested to the client that all drawings be reduced for easy handling, a system of coding for various floor plans, etc. be devised, and that a means of producing drawings at a more rapid rate be found.

The latter was accomplished by constructing a simple fixed-focus camera which would reduce original copy to half scale or 1/4 size. Drawings could be made at a scale large enough to accommodate all information (1/2 inch), then reduced photographically. From the photographic negative of the drawings, now reduced to a 1/4 inch scale, diazo prints would be made. Once approved and corrected all subsequent prints resulting from the same negative would require no additional checking thus accelerating approvals.

To reduce blueprint costs a further improvement was made — instead of using diazos, two pages were printed at once on an offset press and then cut apart. These prints, now dark blue line on white paper were superior as they neither faded nor stained the hands and could be written or stamped upon.

### Speeding up Production

Abrams now had a workable "design system." When he moved his office in 1952 he added another home-made darkroom camera with a capacity of 48" x 96" on both copy board and film holder with which he could enlarge ten times or reduce ten times from the original.

One of his next projects was for 500 units of Air Force housing. Time again was an important factor as, exclusive of review time, only 45 days were allowed for planning, designing and preparation of drawings and specifications. Using the system his office

designed the houses, reduced them to 1/40th-inch scale, and prepared the site plan from accurate prints of the detailed floor plans by preparing a base site plan and pasting all of the house plans on a clear overlay. This was photographed and it became a simple matter to make reproducible prints to which specialties such as sanitary, grading, electric etc. could be added. The working drawings of the individual houses were done with overlays to change the plans for locations of carports, differing exterior treatments, varying roofs, etc. Specifications were prepared on automatic tape operated typewriters (Justo-writers) which eliminate much re-typing of standard specification items by reusing the original tapes. Print-outs were stripped into columns and also photographically reduced so that seven drawing pages of specifications became equivalent to 200 sheets of typical 8 1/2" x 11" specification sheets.

Further refinements to the system developed when Abrams' office became consultants for a housing project in Mexico. The total siting encompassed 6,400 houses but only three different house plans were actually drawn. These were designed at half-inch scale, reduced to 1/8th inch and combined to form neighbourhood blocks. Blocks were then further reduced to 1/24th-inch and four prints were combined into larger neighbourhoods. These were then photographed at 1/80th-inch scale and 100 sheets were printed, each containing a neighbourhood of approximately 200 houses. These then were assembled on the base map and further reduced to 1/200th-inch scale. (This entire operation of assembling house plans, comparison analyses, neighbourhood plans, reduced neighbourhood plans and plans of the total development required less than 80 man hours. Using conventional design drafting methods, the same effort would have required at least 800 man hours. By laying out all the individual houses in detail it was possible to demonstrate that the designed houses, although differing in size, shape and street pattern, contained the same number of living units as the owner's original design.

### No Limits

By approaching the problem of site planning from detailed building plans, Abrams found that many hours of hesitation in determining orientation, adjustment to grade, types of units, etc., were eliminated. Using exact house plans at small scale permitted flexibility of placement during the design process without final drawings having to be made for the determination of the advantages of alternative schemes.

After a number of schemes had been prepared, Abrams' office would evaluate the one which most nearly satisfied all criteria. It was found that many more design possibilities existed in the inter-arrangement of precisely delineated unit plans because the designers subconsciously walked through projects in the design process rather than making pictorial patterns of abstract rectangles.

When Abrams acquired several Navy contracts for family housing, he improved the system by using two colors. A positive of the background in one color was screened to reduce its intensity and details were overprinted in a solid color. As with the Air Force job, this was done by an overlay technique. Drawing-size negatives were made of the base map including details. The Navy printed the background in green and the lines in black on a single sheet for bidding purposes and received full-size reproducible from Abrams' office for record copies. Bidding was greatly assisted by this use of two colors due to easy definition of data. It was later found that by using a screen for the background and solid line for the details the same effect was achieved in a single color at less cost.

#### Machine-made Drawings

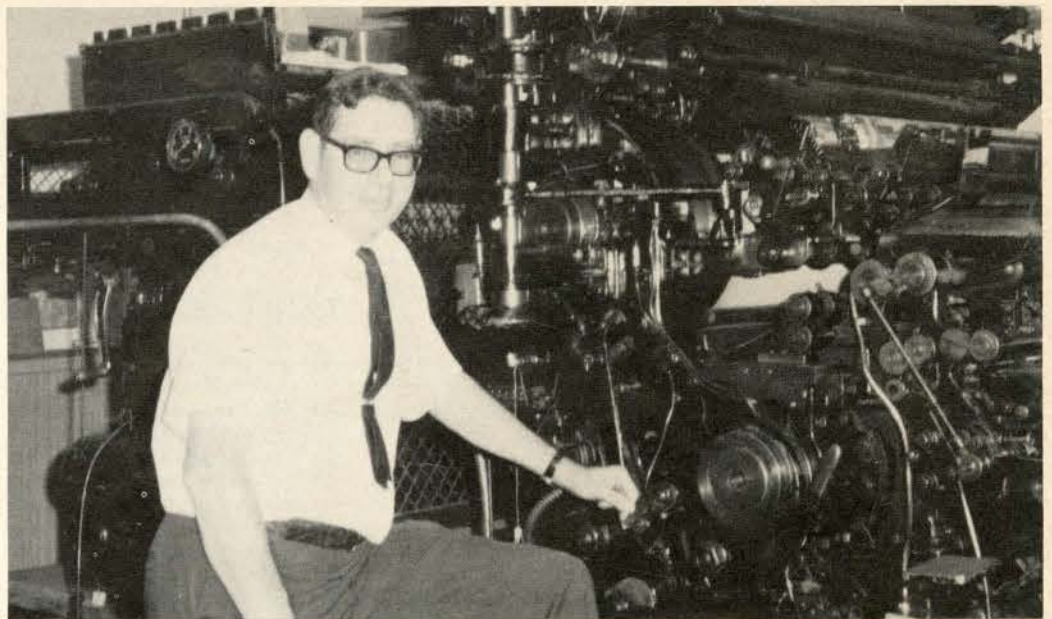
The present process is to take pasted-up buildings and/or details, and print on tracing paper on the press as many copies as are needed for designation, dimensions, room finishes, doors, windows, electrical, heating, plumbing, etc. (one sheet for each discipline). This allows specialists to work independently and all information such as dimensions, doors, windows, finishes, etc. need not be placed on the same drawing.

While final printing requires more drawings because of the greater number of tracings, the designation of, for example, doors or windows on a separate sheet eliminates the necessity of making a door and window schedule for cross-checking, which is particularly necessary when changes are made at later stages of the production cycle.

Abrams feels that the "Design System" is applicable to all building types, regardless of their complexity, for the specific reason

that the more involved and complex the building, the more complicated the drafting that is required and the more complex are the thought processes necessary to adequately crystallize the design. By proceeding immediately from the concepts to the larger scale study of the component elements, areas of constraint, detailed limitations, and inter-related disciplines are readily determined and revealed. The designer is left with the freedom of exploring a greater number of solutions for each problem, since he is not confronted with the necessity of the technical problem of reproducing his basic design at ever-increasing scales by hand-drawn methods.

In next month's Practice column we will discuss how the system actually works in practice and demonstrate this process by using a hypothetical school design.



California architect Ned Abrams beside his Harris offset press which he uses to print drawings

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## NRC

### Publications

Strength Studies on Concrete. NRC TT 1327.

The Dynamic-elastic Behaviour of foamed Plastics. NRC TT 1328.

Fire Resistance of Buildings. NRC TT 1334.

A Cost Study in House Painting. NRC 10243, price 50c.

Housing Research & Development in Canada. NRC 10351, price 10c.

Quick Clays of Eastern Canada. NRC 10387, price 50c.

Elastic & Strength Properties of Freshwater Ice. NRC 10401, price 25c.

Pressures Developed During the Unidirectional Freezing of Water Saturated Porous Materials. NRC 10383, price 25c.

Interrelation of Hardness, Modulus of Elasticity and Porosity in Various Gypsum Systems. NRC 10385, price 10c.

Effect of Organic Surface Agents on Properties of Hydrated Cement Compacts. NRC 10388, price 10c.

Model study of Ice Pressures. NRC 10400, price 10c.



## Grant Made for School Study

VANCOUVER: A grant of \$4,500 has been made to a University of British Columbia researcher in the Faculty of Architecture, Dr Robin Clarke, for the investigation of centralized planning of school projects as a means of cut-

ting costs. The BC Provincial Department of Trade and Commerce has given an additional \$3,000 to speed completion of the research.

Dr Clarke feels that in addition to a cost saving (it is estimated that Metro Toronto's SEF program will save 1/3 of construction cost), centralized planning will enable more study of the kind of design that would best meet student and teacher needs and offer the most flexibility.

Data processing experts from the California State Department of Education and the Education Data Processing Centre in Ventura, California, are cooperating with Dr Clarke on the project.

## Urban Info Sought

The Canadian Council on Urban and Regional Research is presently studying how urban information is handled in Canada and invites individuals and agencies who use such information to submit outlines of their experience plus suggestions. Further information is available from Council offices, Suite 511, 151 Slater St., Ottawa 4.

Le Conseil Canadien de Recherches Urbaines et Régionales étudie présentement le traitement de l'information urbaine au Canada. Le Conseil invite-tout les individus et organismes intéressés en matière d'information urbaine à lui faire part de leur expérience et de leurs suggestions. De plus amples renseignements peuvent être obtenus en communiquant avec le Conseil, 151 rue Slater, Suite 511, Ottawa 4. Le rapport final de cet étude doit être soumis au cours du premier semestre de 1970.

## PCA Announces Awards

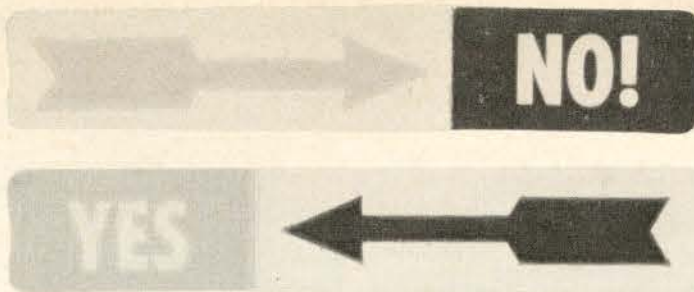
The rules for eligibility for the 1969-70 Portland Cement Association Scholarship Awards Program have just been announced. Any fourth (next-to-last) year student attending a School in the US or Canada which is a member or associate member of the Association of Collegiate Schools of Architecture is eligible to submit a design solution. In Canada that includes UBC, U. of Manitoba, U. of Toronto, McGill and U. de Montréal.

One entry only is eligible from each School and must be selected and sponsored by its faculty. Entries must be received for international judging by March 16, 1970. Judging will be by a panel of architects and educators to be selected by Portland Cement.

A possible six awards of merit, two in each of three geographic divisions, will be offered. All winners will receive a scholarship not to exceed \$1,500.00 to the 1970 summer session at Fontainebleau School of Fine Arts, France.

Design solutions may be of any height and building type but must be designed to meet commercial, institutional, residential or religious needs and designed in terms of concrete or cement-using material.

Further information is available from Architectural Scholarships, Portland Cement Association, Old Orchard Road, Skokie, Illinois 60076.



## Bourse Francou Pour 1969



Pierre Campeau, gagnant de la Bourse Francou pour l'année 1969. M. Campeau est Baccalauréat en Architecture de l'Université de Montréal.

## IS OFFICE LANDSCAPING REALLY BETTER?

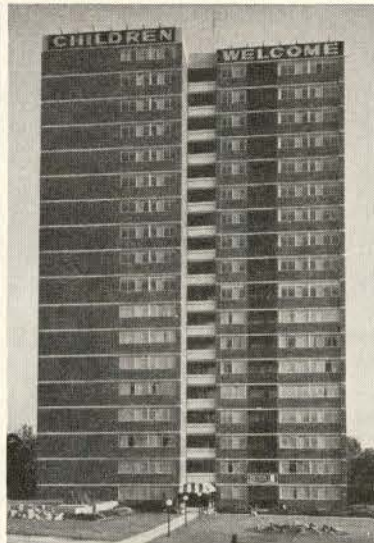
Has the design of an office much effect on those who work in it? Not according to two Cornell University researchers who did a comparison study on two functioning offices, one designed according to the office landscape concept, the other as a conventional office with separate, permanent offices and rectilinear furniture arrangement.

Alan T. Hundert and Nathaniel Greenfield reported to the American Psychological Associ-

ation in Washington in September that their preliminary study failed to demonstrate that office landscape was any better. In fact, they found it to be less effective than conventional office design in physical environment, job involvement and commitment, interpersonal relations, cooperation and morale, superior-subordinate relationships, sense of awareness and involvement in the organization, and privacy — all areas office landscaping is supposed to improve.



100 Queen Street North, Kitchener, Ont. Owner & Builder: Faber Construction Limited. Archt: Petroff & Jeruzalski. Cons. Struct. Engr: Alex Tobias & Associates Limited. Masonry Contr: Gottardo Contracting Company Limited. Concrete Masonry Units: Hogg Fuel & Supply Limited. Ready-Mixed Concrete: H. Boehmer & Company Limited.



Top of the Valley, Toronto. Owners: Rubin Corporation Ltd. & Yorkwood Investments. Archt: Henry Fliess. Genl. Contr: Joseph Godfrey. Masonry Contr: Zachary DeVuono. Concrete Masonry Units: York Block and Building Supply. Ready-Mixed Concrete: McCord & Company.



1000 Broadview Apartment Building, Toronto. Owner & Builder: Tova Developments Limited. Archt: Grozbord, King & Associates Ltd. Masonry Contr: Prime Construction Company. Concrete Blocks: Meteor Building Supplies Ltd. "Canada" Masonry Cement: Blair Supply Company Ltd.

# "Canada" Masonry Cement



El Mirador Motor Inn, Ottawa, Ont. Owned, designed and built by Gillin Engineering & Construction Ltd. Masonry Contr: Federal Masonry Contractors Ltd. Ready-Mixed Concrete: Francon Limited.



Fire & Welfare Building, Toronto. Owned, designed & built by: City of Toronto. Masonry Contr: D.M.S. Contractors Limited. "Canada" Masonry Cement Supplied by: Community Building Supplies Ltd.

University of Saint John, Saint John, N.B. Archt: Mott, Myles and Chatwin. Gen. Contr: Dineen Construction Co. Ltd. Masonry Contr: Saint John Bricklayers Ltd. Precast Concrete Panels: Strescon Ltd. Ready-Mixed Concrete: Jos. A. Likely Ltd.



Apartment Building, Brantford, Ont. Owner & Builder: Galbar Investments Limited. Masonry Contr: Robert Poirier. Concrete Masonry Units: Brantford Brick Ltd. Ready-Mixed Concrete: Red-D-Mix Concrete Company.





# New Systems Periodical

## Maillard Maîtrise à Laval



Depuis la création en 1966-67 des études de maîtrise en architecture, l'Université Laval a conféré le 19 juin 1969 son premier grade de Maître en Architecture à Alain Maillard. Le sujet de sa thèse était "De l'héritage colonial de l'urbanisme en Afrique à l'africanisation des architectes-urbanistes". Les directeurs de thèse étaient Professeur Alfred Neumann et Alf Schwartz.

Professeur attaché à l'École d'Architecture de l'Université Laval de 1961 à 1969, M. Maillard est spécialisé dans le domaine de l'habitat et de l'aménagement urbain des pays du Tiers Monde. En 1963-64 au titre de l'assistance technique, il était envoyé comme

expert auprès du Gouvernement du Togo pour assurer la direction et la réorganisation des services architecture et urbanisme de ce pays ouest-africain. En 1965 il créait l'OCTA, un office de coopération technique en architecture et aménagement à l'intention des pays africains francophones.

The first issue of a periodical entitled "Industrialization Forum" is scheduled to appear October 16th.

The editors, two industrialization and systems specialists, Colin Davidson of the Université de Montréal and Washington University, St. Louis, Missouri, and Arnold Rosner of the University of Washington, Seattle, announce that their publication will focus on change in building systems and construction, growth in analysis and research.

The publication is being published jointly for U de M and Washington U., St. Louis, and is

available in French and English. Subscriptions are \$5.00 for four issues. First copies can be obtained at no charge from the Faculté de l'Aménagement, U de Montréal, C.P.6128, Montreal 3.

Each issue will comprise four sections: (i) definitive articles on systems, construction analysis and research (ii) interim reports of work in progress, (iii) running lists of projects and participants, and (iv) a running bibliography. Initially publication is expected to be every three months but the aim of the editors is to be flexible to keep pace with needs.

# 6

## Students win RAIC Medals

Six architectural students from seven eligible schools were awarded RAIC Student Medals this year. No winner was named by the Nova Scotia Technical College. Biographies and photographs of the six follow.



Nichols

Downey

David Wayne Nichols, medalist from the UBC School of Architecture entered the School in 1966 with a B.A. At that time he was awarded the AIBC Scholarship for the student entering with the highest standard. He continued his distinguished record throughout his studies in architecture.

Stanford Paul Downey, McGill RAIC medal winner, has won a number of prizes including the Anglin Norcross Design prize in 1967 and highest standing in 5th year. This year he won the Pilkington scholarship. (see p. 26)



LaRivière

Gallagher

Jean I.C. LaRivière, this year's RAIC medallist from l'École d'Architecture de the Université de Montréal, studied previously at the University of Manitoba. He is presently employed by the management consultant firm of Kates, Peat and Marwick on the planning of the new Montreal Airport.

Patrick David Gallagher, University of Manitoba medal winner, was born in Sydney, Australia and immigrated to Canada in 1964. He won three additional prizes in his final year including the University of Manitoba Gold Medal.



Clark

Gagnon

Gary L. Clark, University of Toronto RAIC medallist, graduated in Architectural Technology from Ryerson before beginning his architectural studies at U of T. He has won a number of other awards including the OAA Book Prize and the Formica Travelling Scholarship.

Jacques Gagnon, gagnant de la médaille de l'RAIC pour l'année 1969 de l'Université Laval, a reçu son Baccalauréat en Arts en 1963. En ce moment il est à l'emploi chez les Architects Vennes & Thibault.

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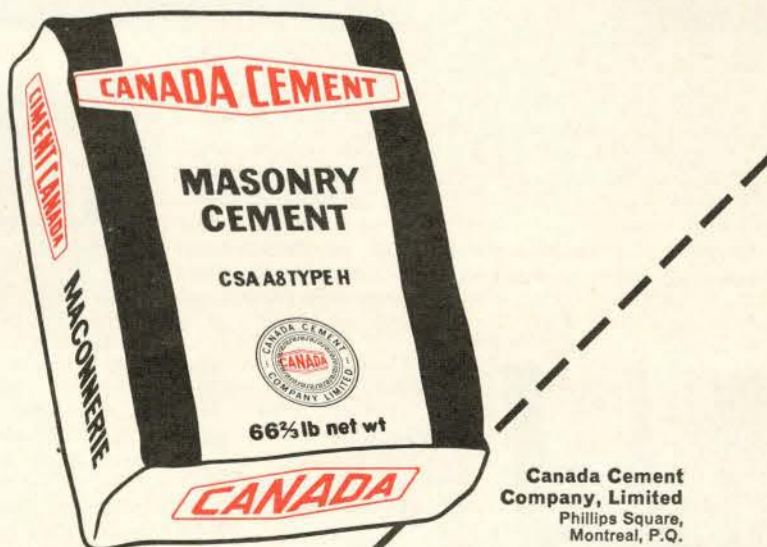


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Beth Jacob School, Montreal. Archt: Schrier & Kessler. Genl. Contr: Montclair Construction Co. Ltd. Masonry Contr: A. Croteau & Fils Inc. Concrete & Precast Concrete Members: Francon Ltd.



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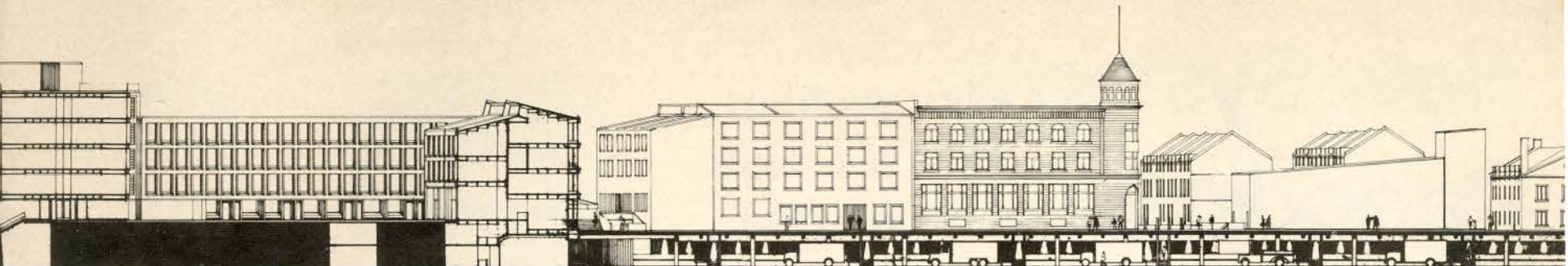
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RUE DU PORT

# Emphasis on Looks of Graphics?

## Pilkington Scholarship 1969

Are Canadian schools of architecture placing more emphasis on the "look" of graphics than on their function, which is the communication of complex ideas as simply as possible?

The 1969 Pilkington Scholarship Jury thinks this year's six entries (two each from McGill, Toronto and Manitoba) so indicate. "Only the winning entry, by Downey of McGill," said the jury, "could claim a spare, clear presentation, where no drawing was done or color used that could have been eliminated, and at the same time missed nothing that was required for clarity."

The jury's comments on the other entries were short and to the point, even if in some cases a little brutal; of Sosin (Toronto), "Sosin begins by stating his goals in the most unrelenting terms... 'Let the building be what it wants to be - there shall be no artsi-architectural interference by *this* architect'. A good puritanical statement, and conceivably even a strong one if lived up to. Unfortunately, Sosin makes a mockery out of it every turn of the way, as he cannot apparently resist architecturally 'fiddling' his thesis into a piece of non-commercial gibberish. Put your actions where your words are."

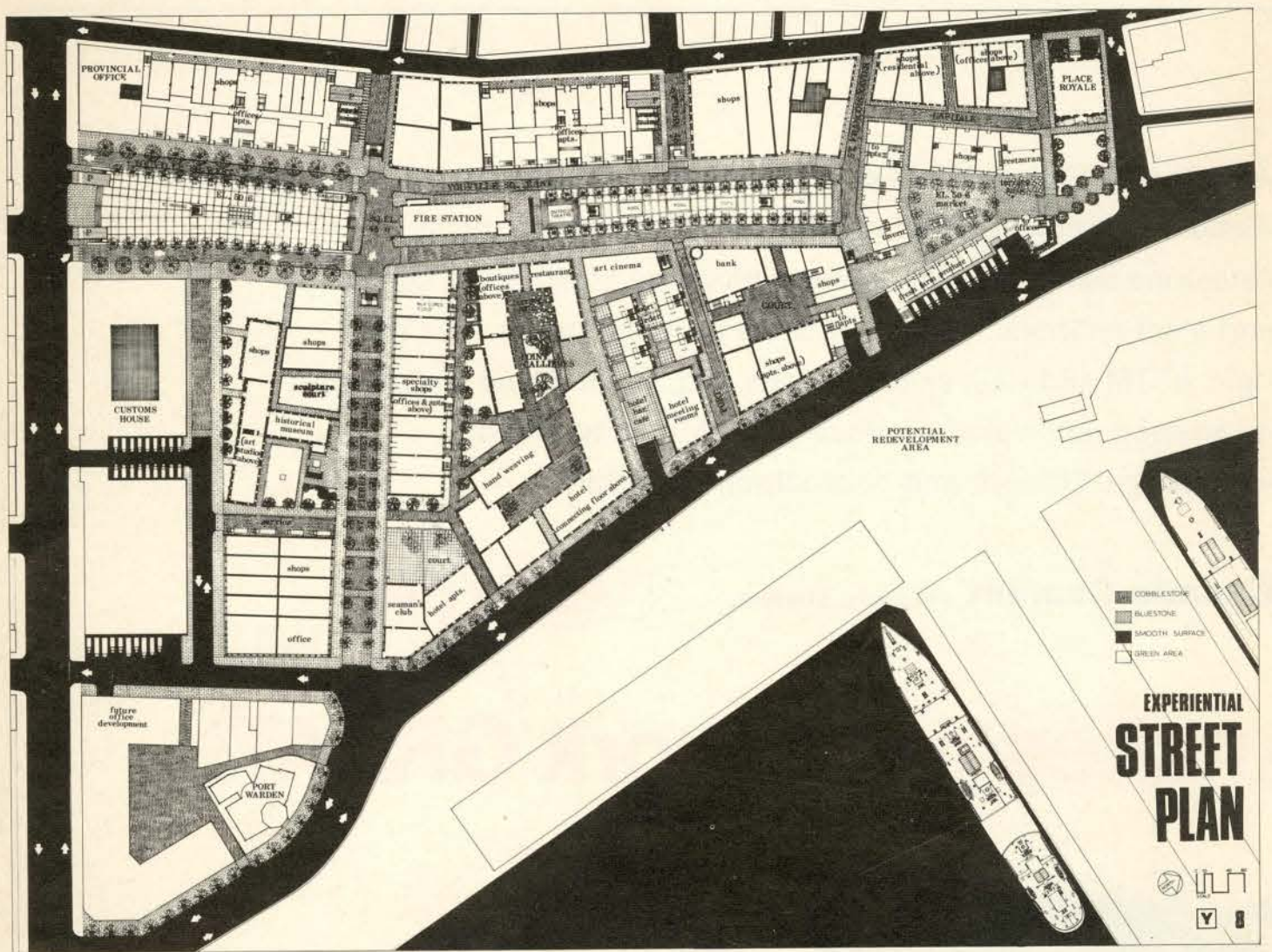
Of Kernohan (Toronto): "The judges agreed at the outset that Kernohan had picked a thesis subject admirably suited to a multi-disciplinary team of engineers."

"There is little to suggest in the choice of resolution of the project that Kernohan, as an architect-to-be, has a great deal to say about the human qualities of the city, or for that matter the architectural qualities of a transportation center."

Of Crain (McGill): "This submission is based on a simple and reasonable idea of fitting a large and expanding development into the network of an existing city."

"However as this idea is expanded into the more sophisticated realms of serviced slabs, infinitely changeable buildings, etc. Crain is very quickly reduced to dealing on the level of romantic notions, and his project, which began with ease and clarity becomes tortuous, complicated and humdrum."

Of Lau (Manitoba): "The stated goals of the thesis are not matched in more than a minor way by the thesis itself. Drawings are almost totally illegible. Pedestrian circulation seems tortuous - although again - drawings give almost no clue to what ties it all together. Even the economic ana-



lysis contains simple arithmetic mistakes.

"Within all of this however is some very handsome handling of small scale architectural environment, and demonstrated ability to deal with complex weaving together of building forms."

Of Gallagher (Manitoba): "This submission is based on a perceptive statement of aims and a good analysis and definition of the problem. As well as this, Gal-

agher has made clear and sensitive observations of the environment of the prairies and the prairie city.

"However, after drawing attention to these qualities as realities on which the design of this prairie courthouse must be dependent, Gallagher then proceeds to design a slick and stylized building that even grinds upon the adjacent earlier buildings, of which it is an extension."



1969 Pilkington jury. Left to right are Henry Sears, Ron Thom, (F), and Colin Vaughan. The Professional Advisor was John Spence, (F).

## Group Entries for Future Pilkington?

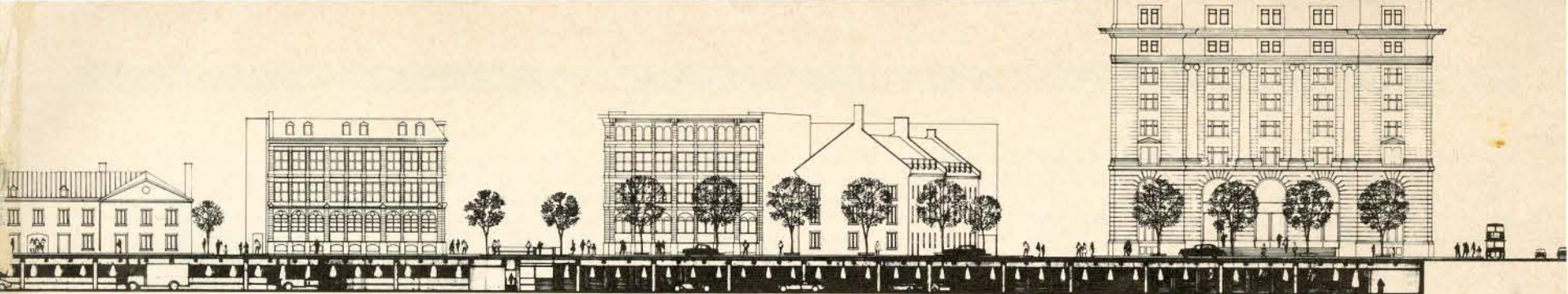
With only three out of seven eligible schools of architecture represented in the Pilkington Scholarship Awards Competition this year, the 1969 jury has recommended that the sponsor should begin to consider the growing practice at most universities of thesis projects being the product of groups rather than of individuals. This year only McGill, Toronto and Manitoba had entries; British Columbia, Nova Scotia, Laval and Université de Montréal operate on the team basis and their possible thesis entries therefore were not eligible.

On the other hand, says a spokesman for Pilkington, group entries would result in changing the intent of the competition,

which is to give an individual a scholarship adequate enough to enable him to advance his knowledge and experience through a year's travel. This objective, it is felt, might be defeated if the \$4,000 scholarship award was divided among four or five students.

This view is shared by John Spence, FRAIC, this year's professional adviser, who feels that the principle of giving an individual award should be retained.

It is learned that the heads of the Canadian Schools of Architecture also have made a suggestion to Pilkington which, they feel, might solve the problem but, it is understood, the suggestion might result in changing the intent of the competition.



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RUE NORMAND

## YOUVILLE SQUARE: STANFORD DOWNEYS ENVIRONMENTAL STUDY



The real purpose of the Youville Square exercise was "the investigation of an urban area scheduled for renewal according to a defined set of performance characteristics which can be applied to any environmental problem".

Stanford Downey of McGill, winner of the \$4,000 Pilkington 1969 Travelling Scholarship, used the following set of performance characteristics as his guidelines: *accessibility* — efficiency in

moving and communicating between nuclei of activity; *adequacy* — the quality, availability, and inter-relationship of the facilities in proportion to the number of expected users; *diversity* — the range of variance in facility, and a valid spacial mixture of this variance; *safety* — the minimization of risk for pedestrians and vehicles, the minimization of psychological stress; *legibility* — strong structuring of the ensemble in both time and space for efficiency

of operation, and for orientation and communication; *opportunity* — presentation of an opportunity for free entities to join the system; *adaptability* — ability of the facility to change for new occupancies or new ways of life. He feels that these guidelines can be applied in any environment.

Youville Square presents a special type of environmental design problem in that it is in a built up area in Old Montreal where certain behavior patterns

can already be observed. It is an area which, Mr Downey believes, has been mistreated, lacks much live occupancy but yet has great potential. He has stressed that it is important that the environment is subject to the function it is to fulfill and for this reason the study of Youville Square is concerned with not only physical and historical values but also the potential of the area to accommodate a new set of human actions and behavior.



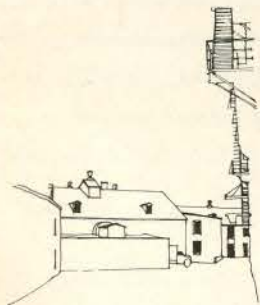
The fire station, almost in the centre of the ensemble, defines two spaces of different qualities.....



The old general hospital on rue Normand: an historic landmark badly converted to warehousing presents excellent rehabilitation potential



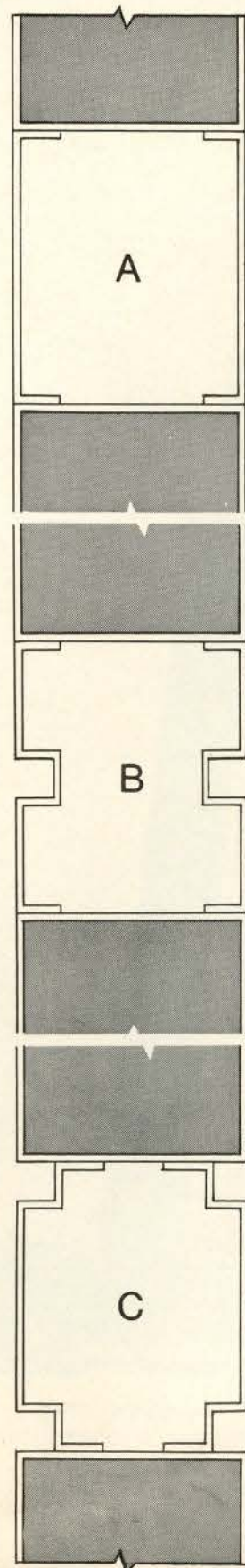
View to harbor along Rue St. Pierre: street has great unity in scale and building style



The remainder of the grey nuns complex on Pointe A Galleries is a Dynamic composition of roofs, walls, passageways, and courtyards.



Youville Square Ensemble



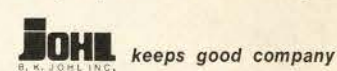
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**Practice Notes**

William D. Webster, MRAIC, and Peter H. Neijmeijer, MRAIC, have formed a partnership under the name of Webster-Neijmeijer Architects, 407 Avenue Building, Saskatoon, Saskatchewan.

With the retirement of Duncan McCulloch from the firm Bell, McCulloch, Spotowski Architects, practice will continue under the name of Bell Spotowski Architects, 10975 - 124 Street, Edmonton 40, Alberta.

Robert M. Mutrie has commenced practice at 62 Richmond Street W., Suite 1104, Toronto 1, Ontario, telephone 368-6539.

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**Positions Wanted**

Quadrilingual B.Arch, Cairo, 1964, M.Arch, McGill, 4 years experience, seeks position in large architectural firm or educational institute to work on school design. Reply V-A. Artinian, 8350 Birnam No. 3, Montreal 303.

28-year-old architect, Diploma and B.Arch, Bristol 1965, registered ARCUK and ARIBA, seeks employment. Reply to G.C.M. Brambell, 30 High St. E., Apt. 1105, Port Credit. 274-6712.

One year transfer with Canadian Architect of similar status, residence included wanted by British Architect, ARIBA, Dip. T.P., (Edinburgh); 5 years experience with Edinburgh firm. Age 29, married, no children. Write: Gordon Lusk, 20 Buckstone Bank, Edinburgh 10, Scotland.

**Artist**

Experienced in Architectural Renderings. Will make illustrations of Architectural Projects in Color or Black and White from plans. Stanley Wyatt, Artist, Studio, 100 Gloucester St. Toronto 5, Phone 923-6510

Graduate Architect. Technical University of Istanbul, seeks work as draftsman with Canadian firm. Bilingual, member TMMOB, three years experience. Reply to Tuncmen Ilkin, 1009 St. Hubert St., No. 9, Montreal, 844-0309.

New Zealand architectural graduate, 25, B.Arch., Auckland, with two years post-graduate experience in commercial and domestic building design and supervision, sketch plans, working drawings, specification and site supervision, seeks position in Canada from November 1969. Reply C. J. Maclaren, 49 Teesdale Street, Burnside, Christchurch 5, New Zealand.

German architect graduate of Technical University of West Berlin, seeks permanent employment in Canada. Experience in Germany, Sweden, Mexico as architectural designer. Presently lecturer at Universidad Ibero-Americana, Mexico City. Reply to Jurgen Meyer, Dipl.-Ing. Architect, Angel Urraza 415-5, Colonia del Valle, Mexico 12, D.F., Mexico.

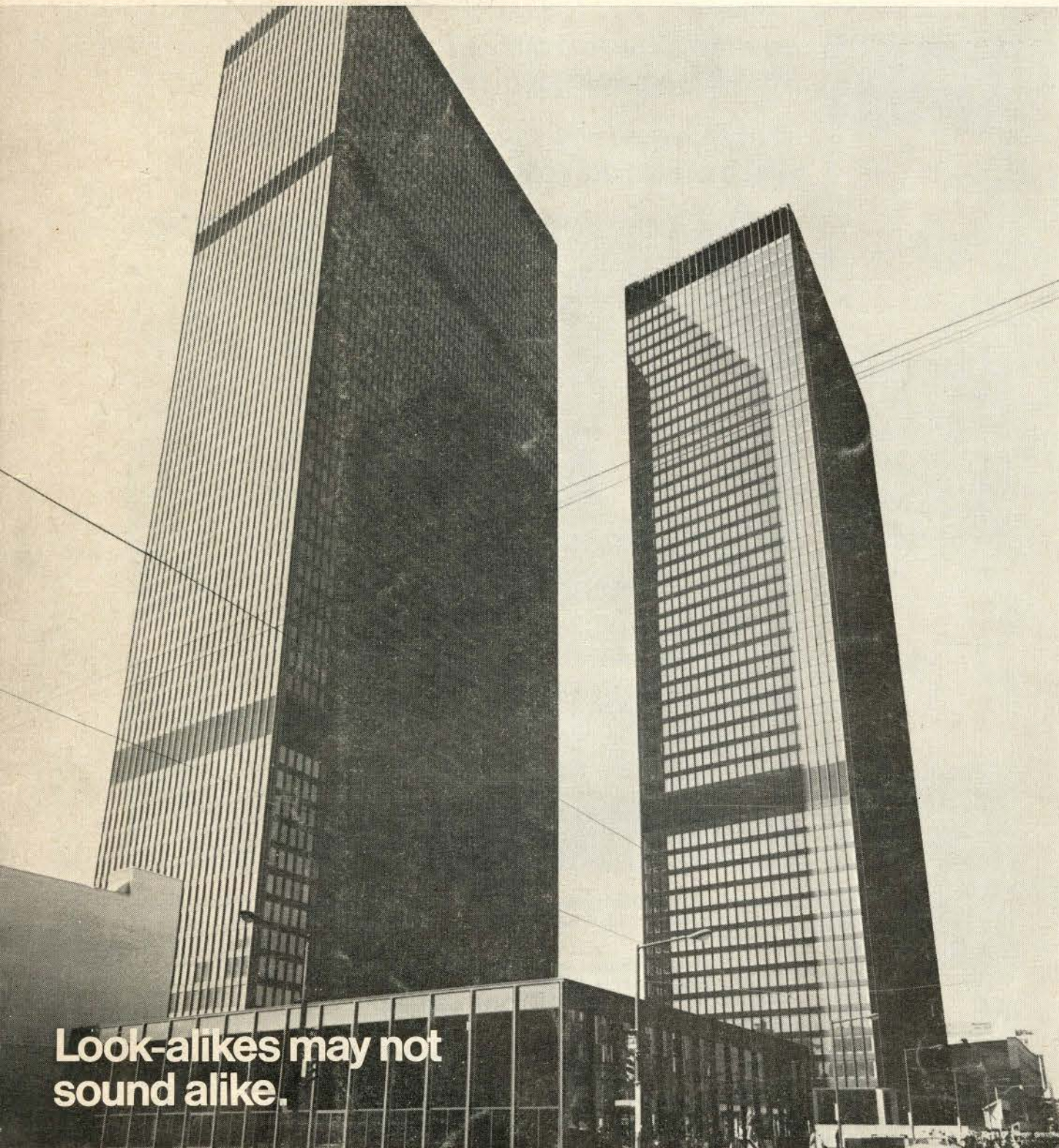
Ceylonese architectural assistant near completion of RIBA Intermediate certificate, 2½ years experience, seeks similar employment or as draftsman. Reply D. Hewanpola, 88 Fife Rd., Colombo 5, Ceylon.

ARIBA, 42 years old, seeks challenging position anywhere in Canada. 27 years government experience in traditional and industrialized construction. Reply E. E. Sutcliffe, Granvin, Moss Side Lane, Wrea Green, Preston, PR4 2PE, England.

B. Arch. Honors, Associate of Indian Institute of Architects, Student member Indian Institute of Town Planners, six years experience, 31 years old, seeks suitable position in Ontario. Reply P. B. Kumbhare, 11, Lalit Kunj, Navrangpura, Ahmedabad 9, India.

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