



**Gordon R. Arnott** of Regina, who assumes the presidency of the RAIC at its Annual Assembly in Winnipeg this week.

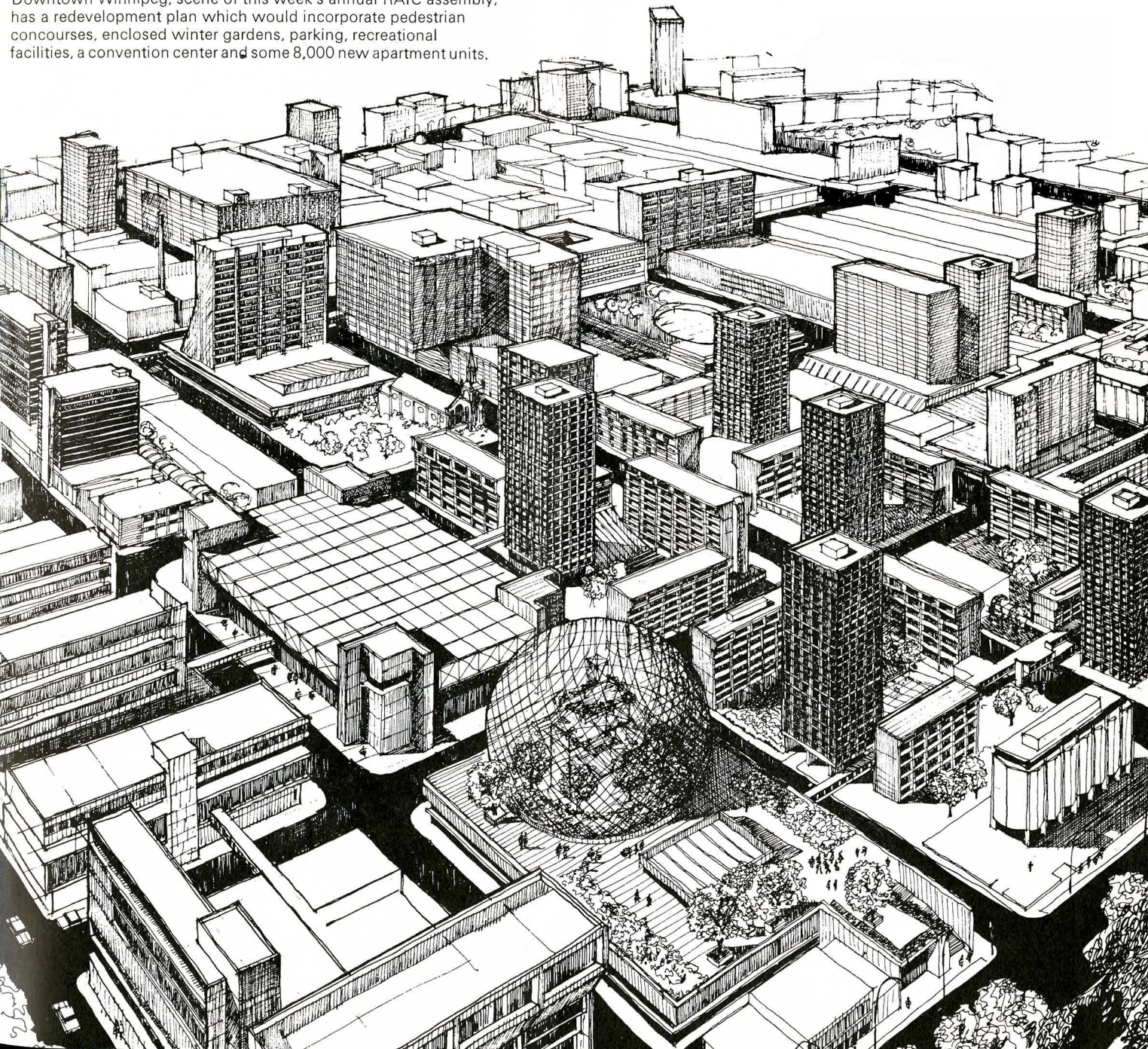
# Architecture Canada

**NEWSMAGAZINE**

Published every two weeks by RAIC/IRAC May 11, 1970

## **Winnipeg: this week (above and p. 2) and 20 years from now (below)**

Downtown Winnipeg, scene of this week's annual RAIC assembly, has a redevelopment plan which would incorporate pedestrian concourses, enclosed winter gardens, parking, recreational facilities, a convention center and some 8,000 new apartment units.





## PLANNING

### Housing plan for southeast Edmonton

The Edmonton planning department is reorganizing its personnel and resources to rush an outline plan for eight square miles of city property in the southeast suburbs.

The city announced ownership of the land last September but planning activity has been stalled, pending appointment of a planning consultant. Now the city planning department will do the job itself, with local consultants if necessary.

Philip Ellwood, assistant director of the planning department, says the project could be compared with new town developments in Britain and Europe in terms of government involvement.

The land was acquired for the city by the provincial government when the city became concerned over escalating land costs in the region. The purchase price averaged less than \$2,000 per acre. After the plan has been drawn up, the city hopes to begin marketing lots in 1971. Prices will not be established until more study is done. Ellwood sees two main benefits:

1) The city "will be able to develop a plan that will show a high standard of contemporary thought";

2) "If a major influence can be brought to bear on one part of the city to affect the cost of housing on a continuing basis, then the effect of this cost adjustment will be felt in other urban areas."

### Plans move ahead for Metro Toronto waterfront

As part of a continuing effort to focus more attention on the development of the Toronto waterfront, the local chapter of the Community Planning Association of Canada held a one-day critique on "Charting the Waterfront Course" at Scarborough College last month.

After a day of studying five alternative plans for implementation, 75 politicians, planners, architects, educators, business leaders and "informed citizens" selected two as best. The provincial government appeared to take notice, as they have just announced that one of the CPAC choices: Metro Toronto and Region and Credit Valley Conservation groups have a go-ahead to implement plans for the stretches either side of the central harbour area.

Purpose of the CPAC exercise was to "bring to bear the thinking of some experienced people" on who should plan the Metro waterfront development, and how it should be implemented. The idea was to bring issues into the open before government decisions were made, to avoid a brouhaha similar to the one currently going on in Toronto over the Spadina Expressway.

Meantime the waterfront protests keep on — encouraged by the City of Toronto Planning Board. This body has circulated a summary of the high-

lights of the various waterfront plans for comment. And last week it co-operated with a 'Citizens' Forum' protest group in a public meeting on the subject.

## COMPETITIONS

### Plan for South Vienna

The Vienna City Council announces a new international competition for the planning and development of a district to the south of the city.

The intention is to develop the 942 hectare site (2,000 acres approximately) into a residential and commercial area which will form an integral part of the city. The competition, open to planners, architects, engineers and specialists in related fields, will offer as first prize AS700,000 (\$29,295), second prize is AS500,000 (\$20,925), third prize, AS300,000 (\$12,555) and fourth AS200,000 (\$8,241). AS1,000,000 (\$41,850) has been allocated for mentions.

Gerd Albers and Rudolf Hillebrecht of West Germany, Emanuel Hurska of Czechoslovakia, Arieh Sharon of Israel and Georg Conditt, Hubert Hoffman and Rudolf Koller of Austria comprise the jury.

Closing dates are: for questions, July 15; for registration, September 30; and for despatch of entries, November 30. Registration forms are available now from Magistratsabteilung 18, Stadt und Landesplanung, Rathaus, A-1082 Vienna, Austria.

## LETTERS

### New format

Sirs:

It is rather unfortunate that your new (and otherwise quite attractive) format has not been able to eliminate a serious fault that had plagued your old monthly publication: the after-the-event information.

When I received your March 30, 1970 copy, which reached me on April 7, 1970, two deadlines: (a) Planification en France (April 1) and (b) Stelco Seminar on steel construction (first Seminar March 31), had already lapsed.

*D. Procos,  
Assistant Professor, NSTC*

*All we need now is the cooperation of the post office. We mail A/C on the Friday prior to Monday's publication date, and all copies should be received no later than Tuesday. Please let us know if your copy arrives late. Then we can light a fire under the post office.*

*The editors*

## ANNUAL ASSEMBLY

RAIC Gold Medals to be awarded

Two RAIC Gold Medals will be awarded this year, one to Eric R. Arthur in recognition of his contribution to architecture, the other, posthumously, to the late John Russell, former Dean of the School of Architecture at the University of Manitoba.

Dr. Arthur will be present at the RAIC Assembly in Winnipeg to receive his award. He taught at the University of Toronto from 1923 to 1966, was editor of the RAIC's journal for 22 years and is the author of many books on architectural history. Last year he was awarded Canada's highest decoration, the Companion of the Order of Canada, the year before he was awarded a Canada Council Medal.



### Assembly Program

#### Wednesday, May 13

Welcome reception at City Hall — evening

#### Thursday, May 14

Members general meeting — morning  
Theme luncheon, Delphi Probe — noon

Delphi Probe seminar — afternoon  
Sweet's Reception at Planetarium Museum — evening

Grand Prix Party, lower concourse, Manitoba Centennial Arts Centre — evening

#### Friday, May 15

Tour, Richardson Building — morning  
Students theme luncheon — noon  
Delphi Probe student seminar — afternoon

College of Fellows Convention and Reception, Manitoba Legislative Buildings — afternoon

#### Saturday, May 16

Tour, Fort Garry campus — morning  
Class reunion luncheon — noon  
Tour, Planetarium — afternoon  
President's reception and annual dinner dance — evening

### Exhibits

Allied Arts Award  
Pilkington Scholarship

### New members of College of Fellows

Fifteen RAIC members will be admitted to the College of Fellows at the annual convocation to be held May 15 during the annual assembly:

*George S. Abram*, formerly of Regina, Sask., received his degree in architecture from the University of Toronto. He is currently serving as chairman of the Ontario association of architects' developer proposal committee. He is a partner in the Don Mills, Ont., firm of Abram, Nowski and McLaughlin.

*Joseph Baker* was born in Manchester, England, and graduated from the University of Manchester in 1953. He has been in private practice in Montreal since 1962 and assistant professor of architecture at McGill since 1968. He was president of the Province of Quebec Association of Architects in 1968.

*Emile Daoust*, son of the late Montreal architect Théodose Daoust, graduated from the University of Montreal, Ecole des Beaux-Arts, in 1930. Prior to serving in the Royal

Canadian Corps of Engineers in the second world war, he was chief architect for the City of Montreal. He is currently Director of the Construction Engineering and Architectural Branch of the Department of Industry, Ottawa.

*Etienne Gaboury*, born in Swan Lake, Man., studied architecture at the University of Manitoba and, on scholarship, at the Ecole des Beaux-Arts, Paris. In 1964–65 he was design critic at the University of Manitoba. He began his practice in 1961 and has received many awards including four honorable mentions in the 1964 Massey Medals competition. He has served on many juries and advisory boards. He is an associate of the Royal Canadian Academy.

*John B. Langley*, of Toronto, graduated from the University of Toronto in architecture in 1934. He served in the Canadian Navy during the second world war, won first prize in the General Motors architectural competition and with the proceeds began private practice in Toronto in 1945. His firm is now known as Govan, Kaminker, Langley, Keenleyside, Melick, Devonshire and Wilson.

*Roy Emile LeMoyne*, né à Lafèche, Sask., en 1920; diplômé de l'Université McGill en 1951; au service de la firme Rother, Bland, Trudeau depuis 1952, et associé principal de la firme Bland, LeMoyne, Shine, architectes et urbanistes; conférencier à l'Université McGill; membre de l'IRAC, AAPQ, OAA, CUQ, ARD, CPAC.

*Raymond Moriyama* was born in Vancouver. He received his Bachelor of Architecture from the University



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*5th Company editorial committee:*  
*Annabel Slaughter, Patrick Hallstrom, Ron Butler, Fiona Mee, Janeva Van Buren, Michael de Pencier.*

Opinions published in Architecture Canada do not necessarily represent the views of the RAIC, nor of the publishers.

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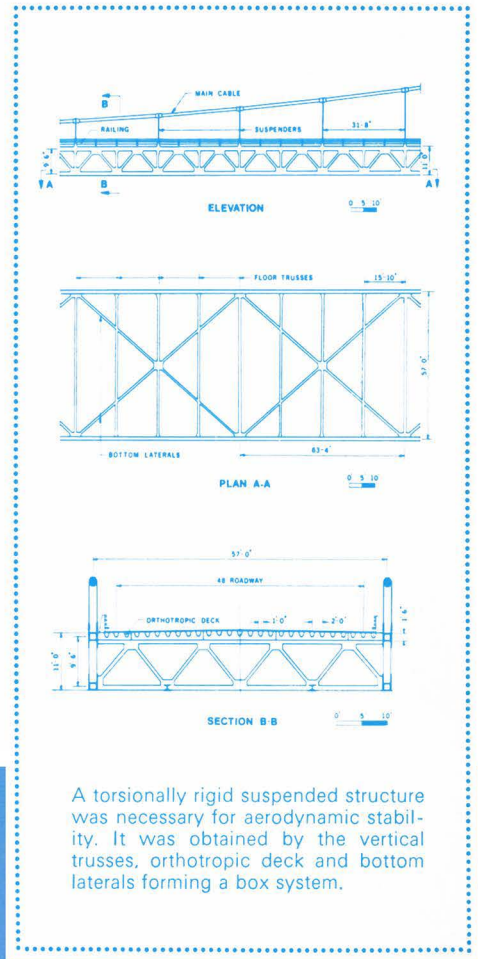
Postage paid at Toronto at third (or fourth) class rate — Permit No. C52



# Unique Halifax bridge design offered many economies

The suspension bridge has generally been the type chosen for clear spans exceeding 1000 ft. What makes the 1400 ft. span A. Murray MacKay Bridge unusual is that it is the first use on this continent of an orthotropic steel deck on a suspension bridge. Three types of suspended structures were considered. The orthotropic design offered an approximate saving of 15% over the other two designs. In addition, the use of an orthotropic deck effected economies in the tower design by reducing the dead load cable reaction and by giving a better distribution of lateral wind load to the towers. The truss diagonals and verticals are welded and fabricated from Algoma steel while all sections of the towers are welded Algoma plate. Whatever your steel requirements, from a major project such as a suspension bridge to a small pedestrian foot bridge, contact Algoma. See what Canadian quality and service can mean to your next project.

*Owner:* Halifax-Dartmouth Bridge Commission  
*Consulting Engineers:* Pratley & Dorton, Montreal  
*Superstructure Contractor:* Canadian Bridge Division of Hawker Industries Ltd., Walkerville, Ont.



A torsionally rigid suspended structure was necessary for aerodynamic stability. It was obtained by the vertical trusses, orthotropic deck and bottom laterals forming a box system.

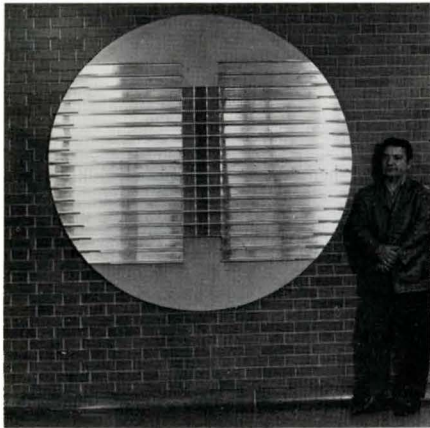
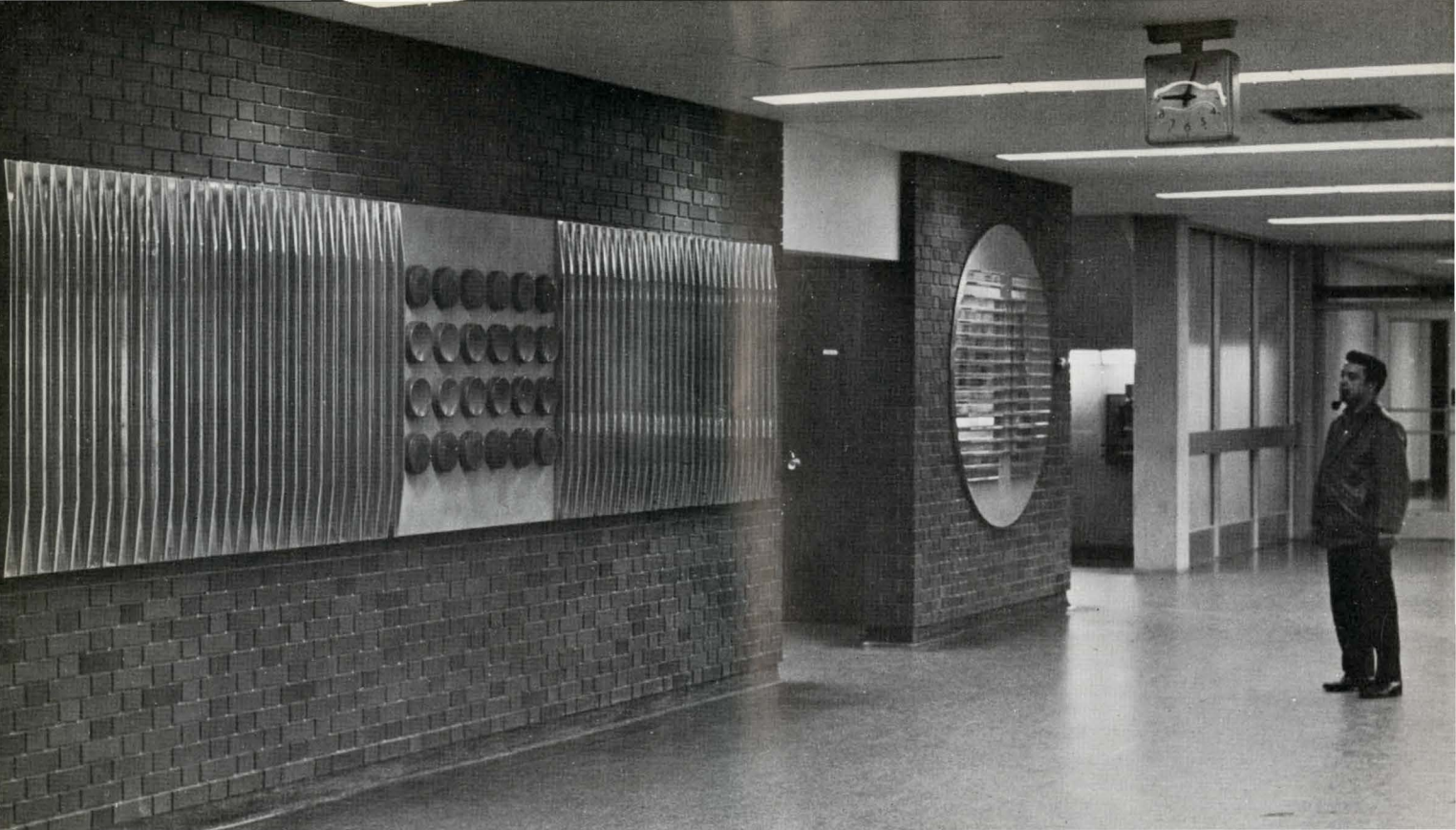


Halifax A. Murray MacKay Bridge nearing completion



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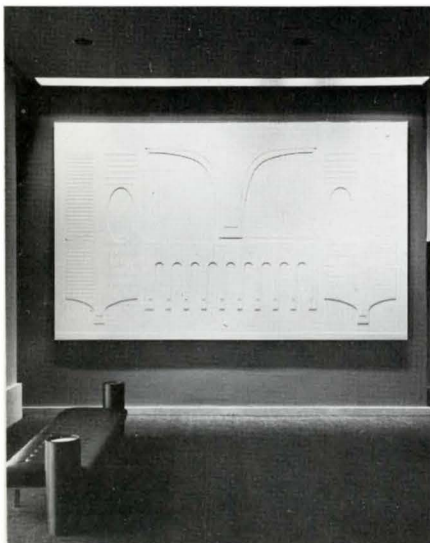




**Contemporary Winnipeg artist wins  
1970 RAIC Allied Arts Medal**

Winner of the RAIC's Allied Arts Medal for this year is Tony Tascona. Aluminum is his current medium and he has used it for all three of his latest commissions. Shown here: above, two polished aluminum murals for the Fletcher Argue Building, University of Manitoba; lower left, one of his two murals for the side lobby, Manitoba Arts Centre.

Tascona, born in St. Boniface, Man., studied at the Winnipeg School of Fine Arts and the School of Fine Arts at the University of Manitoba. His work has been widely exhibited. January, this year, he was elected an associate of the Royal Canadian Academy.





George S. Abram



Joseph Baker



Emile Daoust



Etienne Gaboury



John B. Langley



Roy E. LeMoyné



Raymond E. Moriyama



H. P. Oberlander



Jean Ouellet



Rudolf Papanek



William R. Rhone



D. C. Rowland



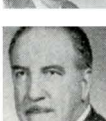
Frank H. Russell



D. L. Sinclair



E. Henri Talbot



of Toronto and his Master's from McGill. He founded his own architectural practice in Toronto in 1958. Since then he has served on many committees and has won numerous awards, including a Massey Medal in 1961.

H. Peter Oberlander studied architecture at McGill and Harvard. He was Canada's first Ph.D. graduate in regional planning from Harvard in 1956. He is now Director of the University of British Columbia School of Regional Planning, a professor of planning and design, chairman of the Vancouver School Board, and president of the Association of Collegiate Schools of Architecture.

Jean Ouellet, né à Rivière-du-Loup, Qué., en 1922; diplômé de l'École des Beaux-Arts de Montréal en 1952; professeur à l'École d'Architecture de Montréal '62-'65; principal associé de la société Ouellet, Reeves, Alain, architectes; membre de la société Jean-Claude LaHaye; bâtiments scolaires et universitaires et d'ensembles d'habitations; plans directeurs; membre de l'IRAC, AAPQ, CUQ, CPAC.

Rudolf Papanek, born in Slovakia in 1926, was raised and educated in Montreal. In 1948 he received the first Master of Architecture degree to be conferred by McGill University. He was appointed to the Canadian Commission for the 1967 World Exhibition in 1964 and was later made deputy to the chief architect. Since July 1968 he has been a partner in the Quebec firm Fiset, Deschamps and Papanek.

William R. Rhone has studied architecture at the University of California, Berkeley, and at the Architectural Association, London, England. He served with the U.S. Army Corps of Engineers from 1952-53. As a partner in the Vancouver firm of Rhone and Iredale, he is involved in both administration and design.

Douglas C. Rowland of Toronto received his B.Sc. from Queen's University and his M.Arch. from Harvard. He joined the Toronto firm of John B. Parkin Associates in 1957 and became partner in charge of design in 1964. Mr. Rowland is an associate of the Royal Canadian Academy.

Frank H. Russell was born in Portage La Prairie, Man. After service in the Canadian Artillery, he studied architecture and received his degree in 1949. He is a partner in the Vancouver firm, Toby, Russell, Buckwell and Associates. He has served on the AIBC registration board and is past chairman of the Vancouver Chapter.

Donald L. Sinclair of Edmonton received his B.Arch. from UBC in 1951. He was chairman of the Edmonton Chapter of the Alberta Association of Architects, has been on the AAA council since 1959. He served as AAA president in 1968. He is a partner in the Edmonton firm, Sinclair, Skakun, Naito.

Henri Talbot, Quebec City.



### ECOLOGY

The other environment

An example of the recent huge growth in public concern for the environment is this button produced by the University of Toronto's Pollution Probe. Architects, developers and others who are concerned with creating new environment are per se environmentalists - but of a different stripe than your traditional conservation-oriented environmentalist. The unique contribution of the architect/environmentalist could be to reconcile the needs of a highly industrialized society with the growing concern of its members for the laws of nature, and a more beautiful and healthy life. A first requirement, suggests architect/environmentalist Roger du Toit, is to bridge the communications gap that now exists between architects and "those other environmentalists".

The modern fad for architects and other technologists to call themselves 'environmentalist' stems from a kind of last ditch attempt to cross the boundaries of the various design disciplines and provide a service that somehow reflects the scope, and density, and complexity of today's burgeoning needs.

April 22 was claimed by environmentalists of a different sort as a national day of environmental concern in the U.S. Their concern is with what is left of the earth after the first set of 'environmentalists' have done with it. In the 'Environmental Handbook' specially prepared for the event (must reading for every would-be environmentalist) Rene Dubos says:

"The colossal inertia . . . makes it unlikely that effective programs of action or research focussed on environmental problems [will be developed]. Two kinds of event, however, may catalyze and accelerate the process. One is some ecological catastrophe. Another is the emergence of a grass roots movement, powered by romantic emotion as much as by factual knowledge, that will give form and strength to the latent public concern with environmental quality."

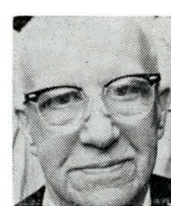
Every major magazine has published special issues or features on the environment, and overpopulation, and pollution. But none has focussed on positive, 'how to design development into a healthy ecosystem' techniques. An important first step in this direction would be to establish a meaningful dialogue between the two types of environmentalist. Architecture Canada might be the catalyst for such a dialogue, thus helping more architects to become effective environmentalists. Roger du Toit.

### ENVIRONMENT

SWA convention looks into future

Buckminster Fuller was the star of this year's specification writers' convention held April 22/25 at Vancouver's Bayshore Inn.

Fuller took a characteristically broad view of the convention theme, "Fusion or Confusion", and talked



about the whole universe. Before any isolated problem is solved the complete picture must be understood, he said. Every item in the world relates to others,

and one change affects many areas. Convention delegates (246) and a large crowd of guests gave Fuller two standing ovations during the course of his talk. According to the editor, Stu Frost, of the Specification Associate, Fuller especially appealed to the many "hippies" in attendance.

RAIC president W. G. Leithead again spoke out for greater unity in the construction industry because "the challenges which face us are enormous and exciting". Leithead calls for industry associations to "join forces" to improve their effectiveness - and thus the environment.

New guidebook to urban revitalization

Ottawa architect John Leaning has, for a number of years, been concerned about the future of older residential urban areas. He feels that razing them to the ground to make way for new development is a negative action and the alternative of removing poor occupants and expensively restoring these areas to their original condition is unjust and unrealistic. His solution: to repair damage where economically possible; reinforce the areas, within definite confines, with apartments, offices and commercial facilities; and generally, by good design, improve visual quality.



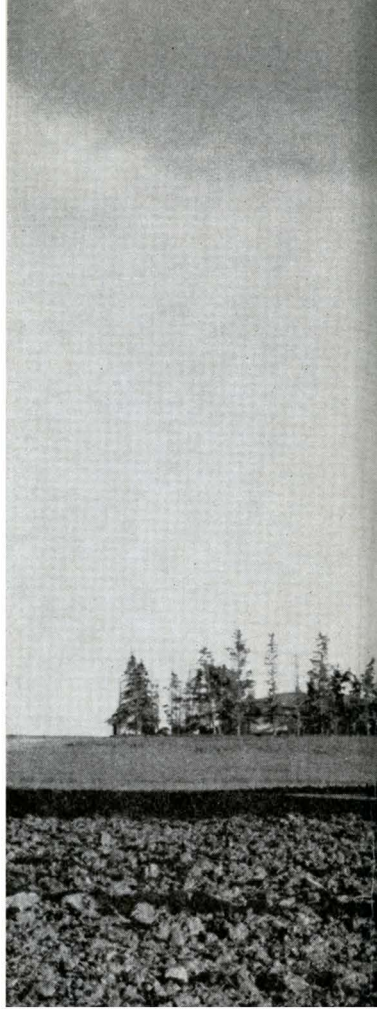
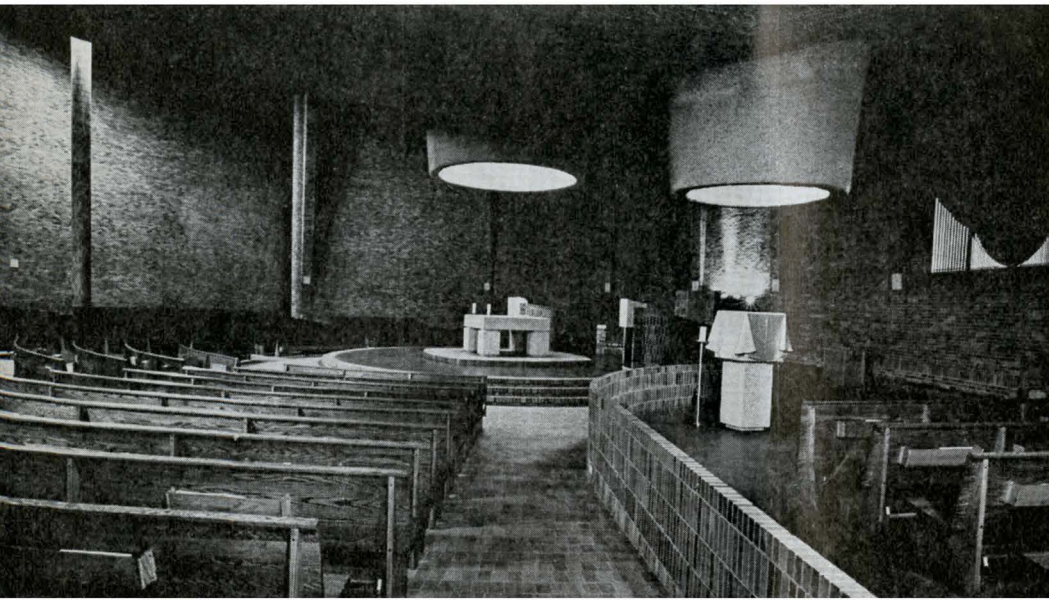
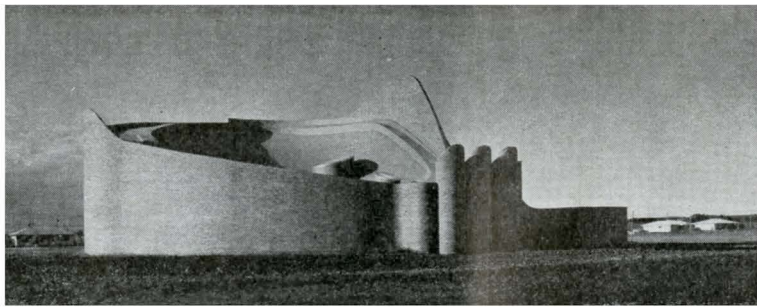
Leaning explains his ideas in a book on his study of the declining Ottawa Glebe area, published by Central Mortgage and Housing Corporation, as The Revitalization of Older Residential Areas. The book outlines policy for individual, community and municipal action and is available free of charge from CMHC.

A controversial new book

Quite a stir has been caused by a recent book by Edward C. Banfield.

Mr. Banfield is professor of urban government at Harvard, author of





### Free-form church becomes Red Deer landmark

The pastor of St. Mary's, Red Deer, asked architect Douglas Cardinal to design a church that could be identified as a Catholic church without signs or crucifixes. Cardinal's solution: a complex which he says "grew from the main altar in the manner of a sea shell". The church interior is dominated by a 6' x 6' altar cut from a six-ton block of local limestone. An overhead skylight bathes it in light and it is almost surrounded by rows of long curving pews.

A spider's web was the inspiration for the 120' concrete roof. Cardinal reports that it took 81,000 computer equations "simply to establish something commonplace in nature". One interesting result of the unusual design is that the sound reverberation time is between five and seven seconds without echo. This produces cathedral-like acoustics. Cardinal, 36, is an Indian who grew up in the area. This was his first major commission

eight books on urban affairs and a member of two Nixon task forces on urban problems. He argues that the basic problems of cities not only cannot be solved by political action but may even be made worse by well-intentioned but fatally flawed policy. He says that "government seems to have a perverse tendency to choose measures that are the very opposites of those that would be recommended on the basis of rational analysis". To demonstrate dilemmas facing public policy-makers, he lists in his book 12 measures which he feels are logically feasible but politically unacceptable.

Critics of the book fear that, as Mr. Banfield is so highly regarded by Nixon's advisors on urban affairs, he may be drawing an intellectual blueprint for federal policy in the field.

#### The controversial list:

- 1) Avoid rhetoric tending to raise expectations to unreasonable and unrealizable levels . . . ;
- 2) Remove impediments to the employment of the unskilled, the unschooled, the young, negroes, women, and others . . . ;
- 3) Reduce the school-leaving age to 14 and encourage boys and girls who are unwilling to go to college to take a full-time job or else enter military service or a civilian youth corps;
- 4) Define poverty in terms of the nearly fixed standard of "hardship", rather than in terms of the elastic one of relative deprivation, and bring all incomes above the poverty line . . . ;
- 5) Give intensive birth-control

guidance to the incompetent poor;

- 6) Pay "problem families" to send infants and children to day nurseries and preschools designed to bring the children into the normal culture;
- 7) Regulate insurance and police practices so as to give potential victims of crime greater incentive to take reasonable precautions to prevent it;
- 8) Intensify police patrol in high-crime areas; permit police to "stop and frisk" and to make misdemeanor arrests on probable cause . . . ;
- 9) Reduce drastically the time elapsing between arrest, trial, and imposition of punishment;
- 10) Abridge "to an appropriate degree the freedom of those who in the opinion of the court are extremely likely to commit crimes";

11) Make it clear in advance that those who incite riot will be severely punished;

12) Prohibit live television coverage of riots "and of incidents likely to provoke them".

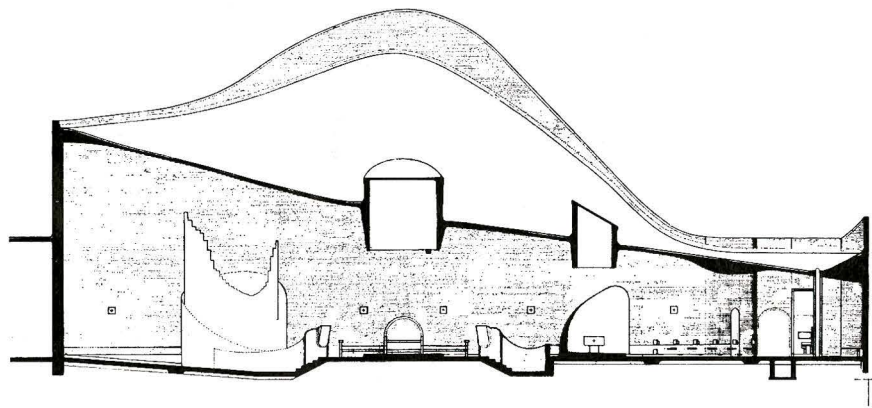
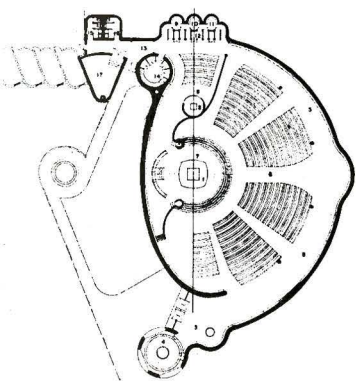
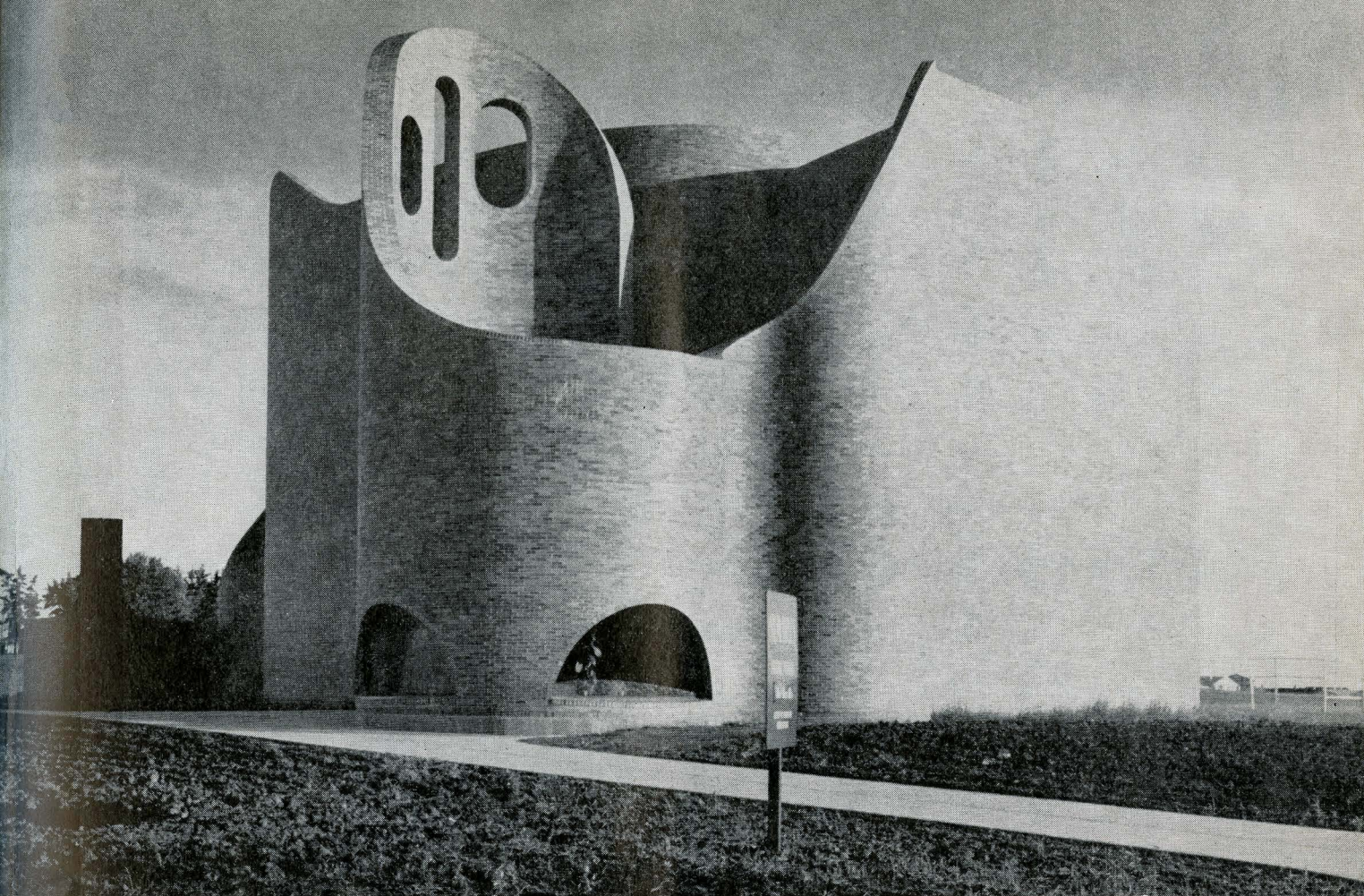
*The Unheavenly City, by Edward C. Banfield. McLelland & Stewart, Toronto, 1970, 308 pp., \$9.00.*

### PEOPLE

Toronto architect R. P. G. Pennington is the new president of the Toronto Chapter of the American Concrete Institute. He was 1966/67 president of the Specification Writers Association of Canada.

George A. Stewart, of Fort Garry, Man., has been appointed to the Planning Secretariat of the University of Manitoba as programming





architect for their new capital projects. Stewart has had his own practice in Fort Garry since 1955.

## PROJECTS

Regina architects Ramsey and Ramsey are designing a \$6.3 million campus centre for the University of Saskatchewan's Saskatoon campus. The multi-purpose building, named Place Riel by the students, is to be an "interdisciplinary meeting ground for students, alumni, faculty, administration and staff". It will house, in 200,000 sq. ft., a book store, bank, barber shop, a theatre, lounges, food services, student and alumni offices, a discotheque and a speakers corner. A \$4.5-million University of Alberta Fine Arts building is one of a series on the campus to be linked by an

enclosed walkway (*A/C*, 4/13), which will feed into the second floor—the building's focal point, with lead-ins to a theatre, concert hall and art gallery to be built in Phase II. An open courtyard surrounded by faculty offices, practice studios, seminar and lounge space will be the third-floor feature. Prime consultant is D. L. Sinclair of Sinclair, Skakun, Naito, Architects.

"The largest 'new town' in the world" is planned for the 86,000-acre Irvine Ranch outside Los Angeles. By the year 2000, it would house 430,000 people in "40 individual residential villages, connected and separated by a 33-mile network of aesthetically landscaped environmental corridors, designed to accommodate future mass public transit systems".

## MISCELLANY

... Our announcement about AIA Masterspec automated system for specification writing in *A/C*, 3/16 has brought several requests for more information. Inquiries should be sent directly to Production Systems for Architects and Engineers, Inc., 343 S. Dearborn St., Suite 1709, Chicago, Ill. 60604.

... "The Office and the Human Performer" will be discussed at seminars for Ontario and Quebec architects, May 19/20, at the Herman Miller Educational Centre, 1883 Yonge St., Toronto. Write: Herman Miller, 149 Bentworth Ave., Toronto.

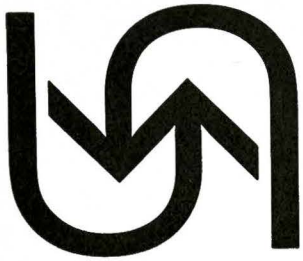
... The possibility of joint-occupancy school sites in the downtown area is being studied for Edmonton.

Developers would get free use of the site for a high-rise apartment or office building, in return for providing a school in the development.

... A new journal being published by the RIBA educational committee will aim to provide an outlet for research finding. *Architectural Research and Teaching* will be distributed twice this year; the first was due May 1, subscription fee is \$12.95 for three issues. Write: RIBA, 66 Portland Place, London W1N, England.

... Canada Cement will hold a two-day seminar, June 2/3, at Sir George Williams University, Montreal, on "Panelized Building Systems". Fee is \$25, including lunch. Write: Canada Cement, Philips Square, Montreal 2.





**Design Canada**

# Research Grants

As part of the Design Canada program for the encouragement of design innovation in Canadian industry, grants will be made available for the following activities:

- 1) Research into the office environment, its functions and related behavioral studies to produce user requirements for products and systems within the office.
- 2) Research for investigation and analysis of hotel and motel accommodation, from the point of view of efficiency, space utilization; and development of user requirements for products and systems.

Grants may be awarded to universities, public or private organizations, groups or individuals.

### Eligibility:

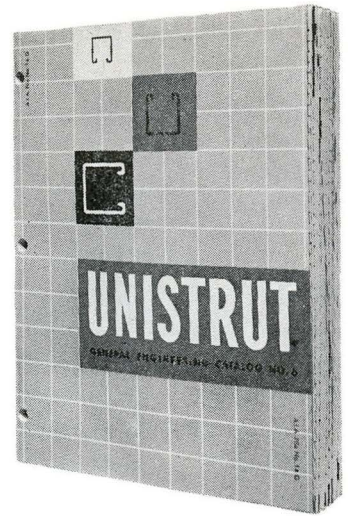
projects must reflect research;  
show promise of improving standards of design;  
have specific, or general application

### Application:

Deadline June 22, 1970  
Forms are available from The Office of Design, Design Capability Division, Department of Industry, Trade & Commerce, 112 Kent Street, Ottawa.

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## MUNICIPALITY OF THE COUNTY OF HALIFAX MUNICIPAL ARCHITECT

**APPLICATIONS** addressed to the undersigned are invited up until 12 o'clock noon, May 22, 1970 for the position of Architect for the Municipality of the County of Halifax.

This is a challenging position. The successful applicant, under the general supervision of Council, the School Capital Program Committee and the Municipal Clerk, will be responsible for the efficient operation of the Architect's Department of the County of Halifax, and, in particular, approved construction program as directed by the School Capital Program Committee.

Work to be performed will include preparation or supervision of the preparation of layouts, detailed drawings, specifications and plans for building new schools and additions in the Municipality; to assist the Committee in choosing sites and to supervise construction and other related duties.

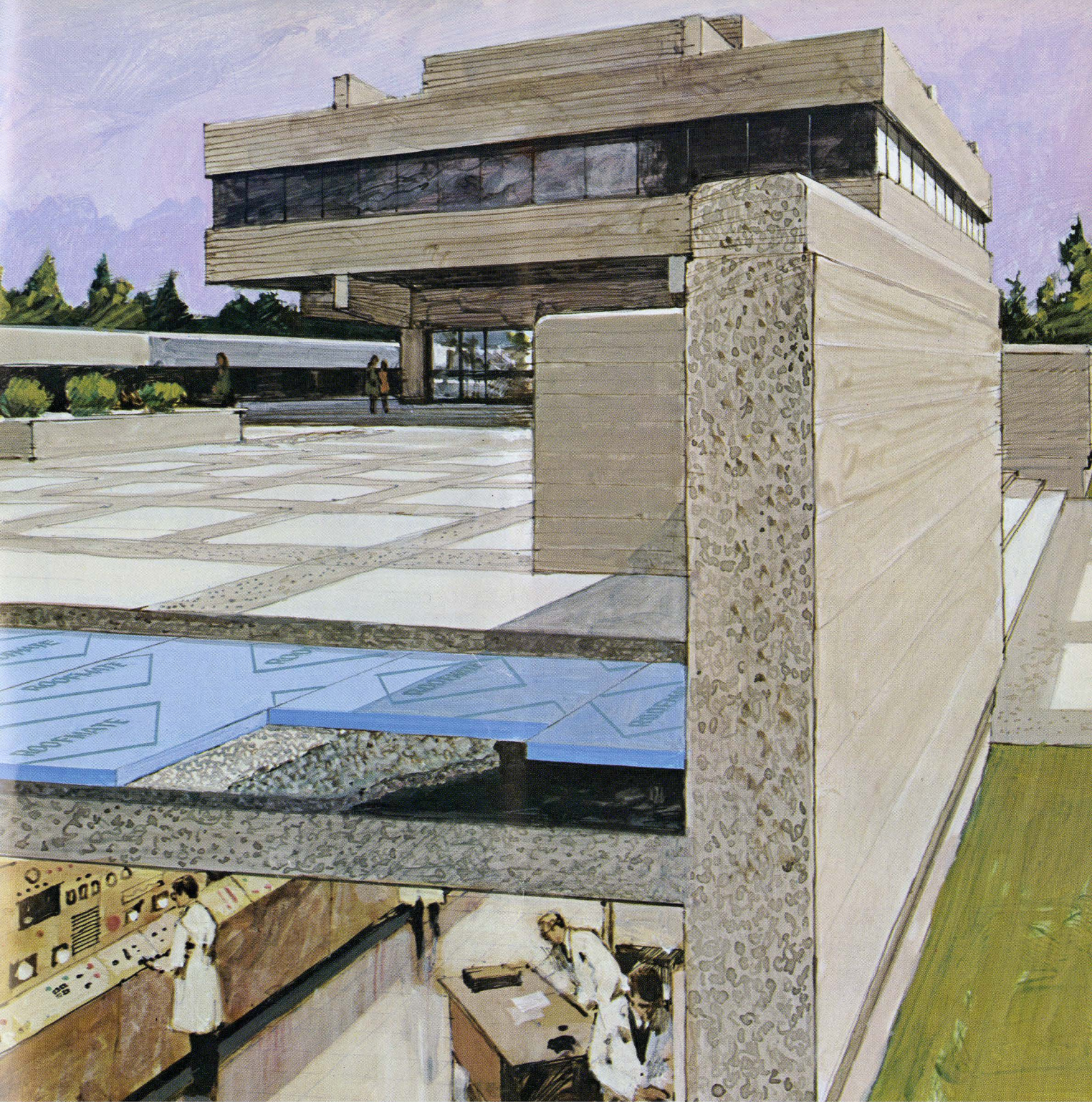
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**SALARY SCALE** - Applications to state salary range expected. Actual salary to be negotiated depending on qualifications, experience, etc.

R. G. HATTIE  
*Municipal Clerk and Treasurer*

Municipal Administration Building,  
38 Dutch Village Road,  
Armdale,  
Halifax, Nova Scotia.





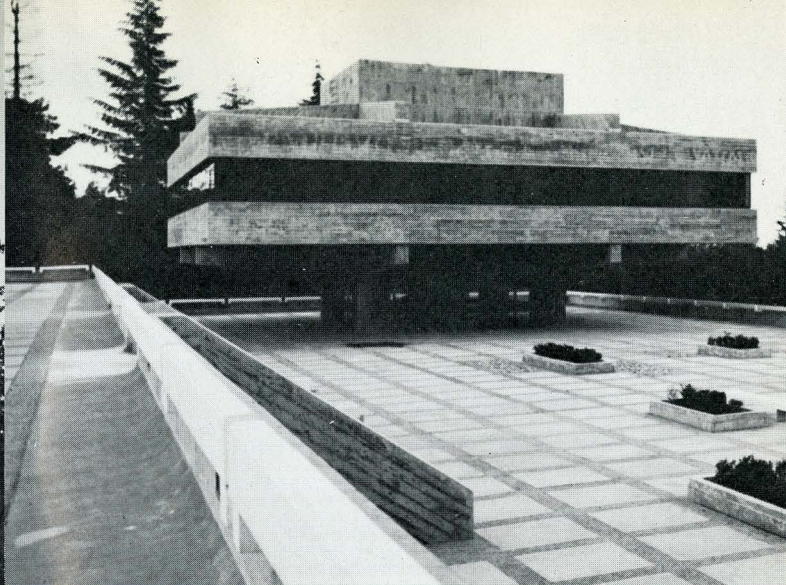
## Is this an up-side-down roof?

Yes, and it works! It's the observation deck roof of the B.C. Hydro control station in Burnaby. The insulation without "equivalent" — Roofmate\* FR — is installed *over* the roof membrane. That way it insulates the roof membrane itself from thermal cycling, assuring a tighter, more dependable roof. We call this new roof system "IRMA." Find out all about it, overleaf...



DOW CHEMICAL OF CANADA, LIMITED





Owner: B.C. Hydro & Power Authority Engineers: International Power & Engineering Consultants Ltd. Architects: Rhone & Iredale  
 General Contractor: Burns & Dutton Construction (1962) Ltd. Roofer: Jackson Sheet Metal & Roofing Co. Ltd.

## B.C. Hydro built this roof up-side-down to last, and to take advantage of a sensational view.

From the observation deck roof of the B.C. Hydro Systems Control Centre near Simon Fraser University, students and visitors can look down on the city of Vancouver a thousand feet below.

Just as remarkable from our point of view is the fact that just inches below the deck is a layer of Roofmate\* FR extruded plastic foam insulation. Below that still, is the actual roof membrane of the control station.

This is the IRMA roof system. (Inverted Roof Membrane Assembly). And it makes a lot of practical sense, with or without a traffic deck.

In a conventional built-up roof, the membrane is exposed to the adverse effects of thermal cycling, exposure and traffic—cracking, wrinkling, ridging, etc. With IRMA (insulation above the membrane), the membrane itself is protected from extreme variations of heat and cold, sunlight and other deteriorating factors, thereby significantly increasing the service life of the roof membrane. Because Roofmate does not absorb water, the heat loss or gain is the same as if the insulation were installed under the roofing membrane.

The differential movement of the various roof elements caused by temperature changes is also minimized, simplifying design. Also, the IRMA roof has no need for a vapour barrier, even in high humidity buildings, since the roof membrane itself performs this function.

To make the case for the IRMA roof even stronger, many of the problems usually associated with traffic decks are also eliminated. This means you can design the roof of a building to do something more than just sit there.

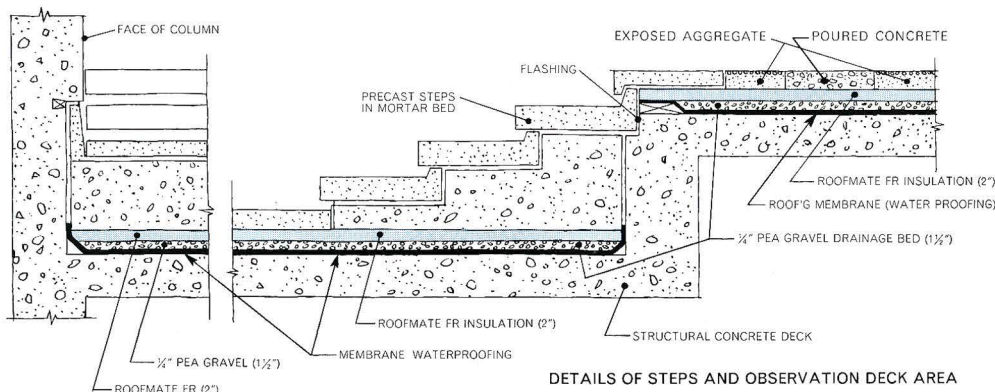
The IRMA system is the product of nearly 20 years' research by Dow. Canadian Building Digests 70 and 75, as published by the Division of Building Research, National Research Council, discuss similar applications.

By our count, the IRMA system has been used for the roof areas of 22 major buildings in Canada since 1966. La Place Bonaventure in Montreal and the McMaster University Arts Building are two examples.

Naturally, the insulation used with the IRMA system is a vital factor. It must be permanently impervious to moisture and have exceptional compressive strength. This combination of properties, plus a permanently low "K" factor, is found in Roofmate FR. There is no "equivalent" to this unique material.

The detail below shows the construction of the observation deck roof of the B.C. Hydro Systems Control Centre. The deck was finished with poured-in-place concrete slabs and exposed aggregate, illustrating yet another advantage of IRMA—design freedom for finish material.

If you'd like more information on the IRMA roof system, consult Section 7ri of the current Sweet's Construction File or write: Construction Material Sales, Dow Chemical of Canada, Limited, Sarnia, Ontario.





***There are  
no pat solutions...  
But there is always an answer!***

RIVERSIDE HOSPITAL — OTTAWA

**THE PROBLEM:**

Some glazings had to provide separation between widely different environments.

- exceptional insulation.
- good sun energy control.
- minimum thermal breakage hazards.
- good noise reduction.

**THE SOLUTION:**

- inside insulation barrier: a Plypane unit made with clear glass.
- outside rain and sun energy control barrier: A sheet of heat absorbing glass.

The performance has been spectacular:

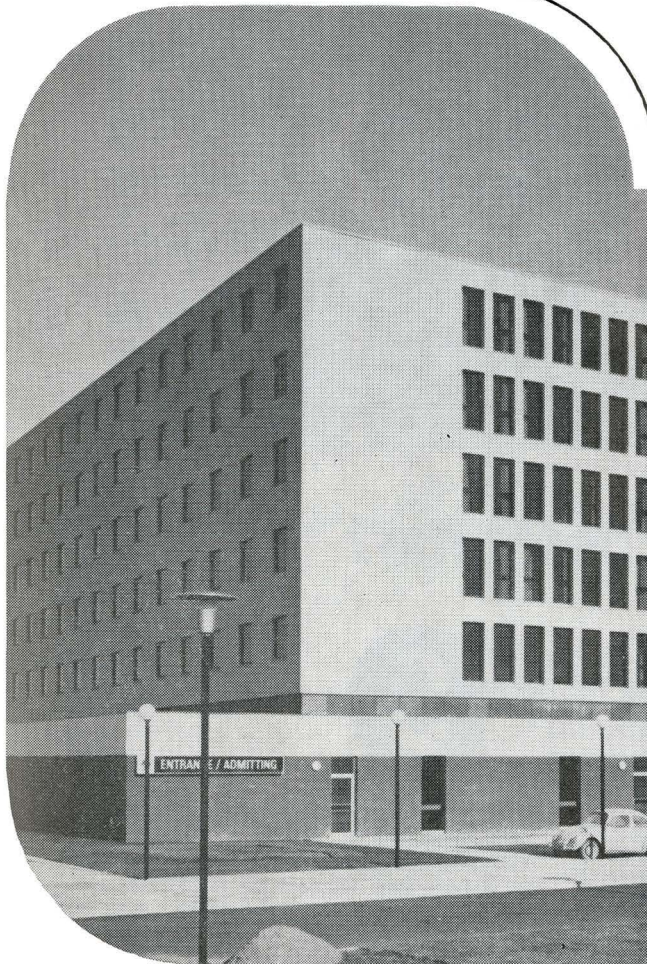
- heat loss reduction: "U" value better than .45 B.T.U./s.f./h/°F
- shading coefficient: lower than .50
- Sound Transmission Class (STC): 47(approx.)

The clever arrangement of the unique Plypane sealed unit combined with the loosely fitted outside heat absorbing glass sheet, eliminated thermal breakage hazards and rain penetration.

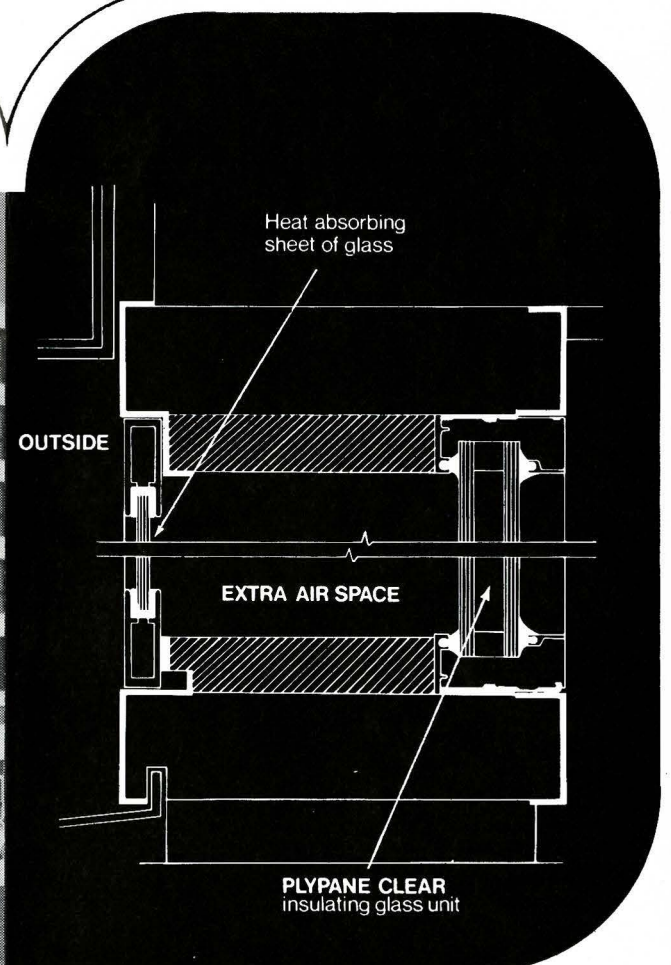
Whether your project is more or less exacting than the Ottawa Riverside Hospital, the many advantages of Plypane units and technical services are well worth considering. Our experience with countless installations having specific requirements is a definite asset to architects, engineers, and window manufacturers.

There may be no magic formula nor ready-made solution, but there is always an answer . . . and we will help you find it!

**plypane inc.**  
9900 Ray Lawson, Montreal 438, P.Q.



Architects and Engineers: Baharrie, Helber, Gibson, Ottawa.



Window and glazing contractor: Preston and Lief Glass Ltd., Ottawa.



# This project architect took 10.7 seconds to find suspended ceilings



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