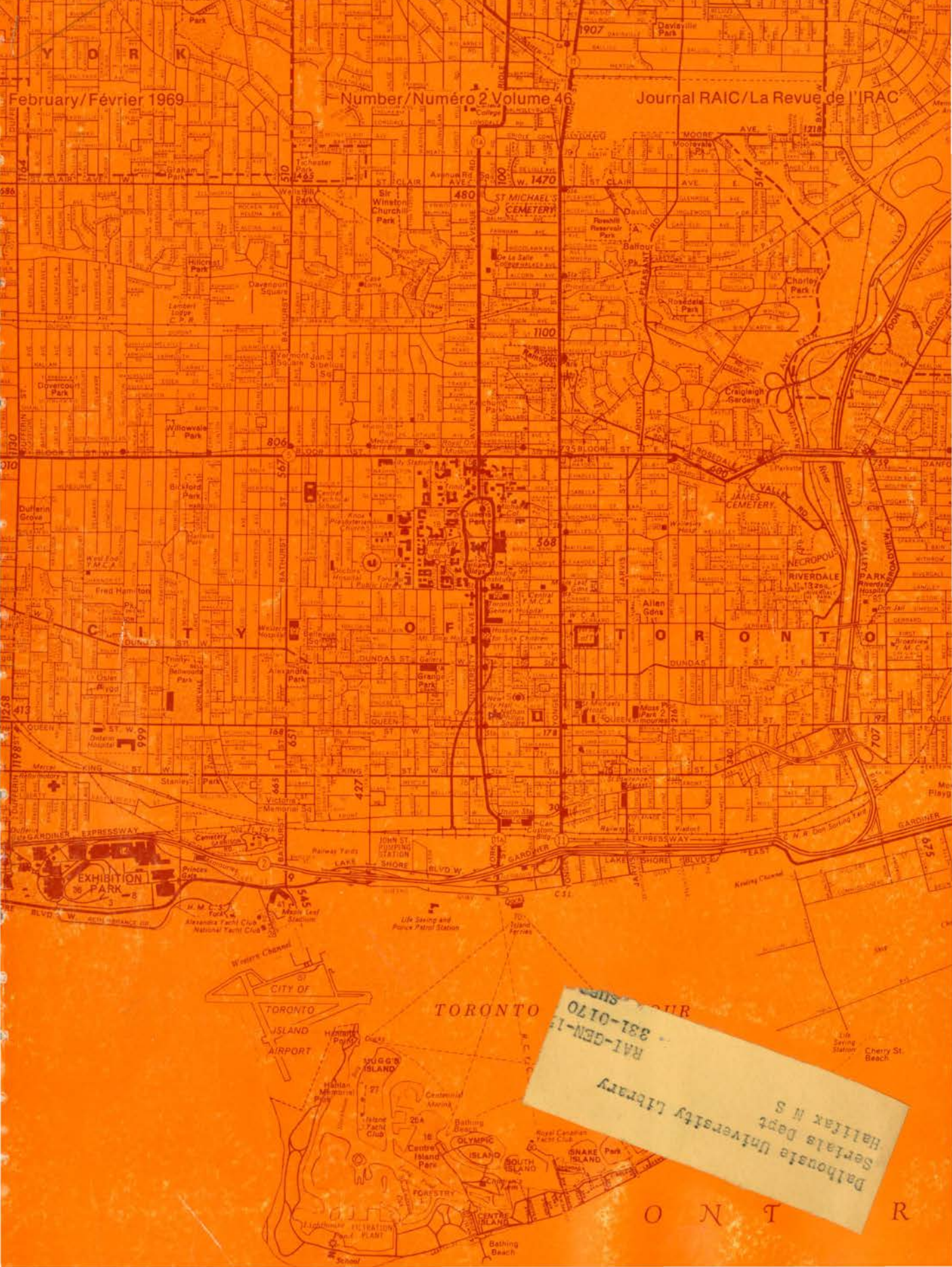


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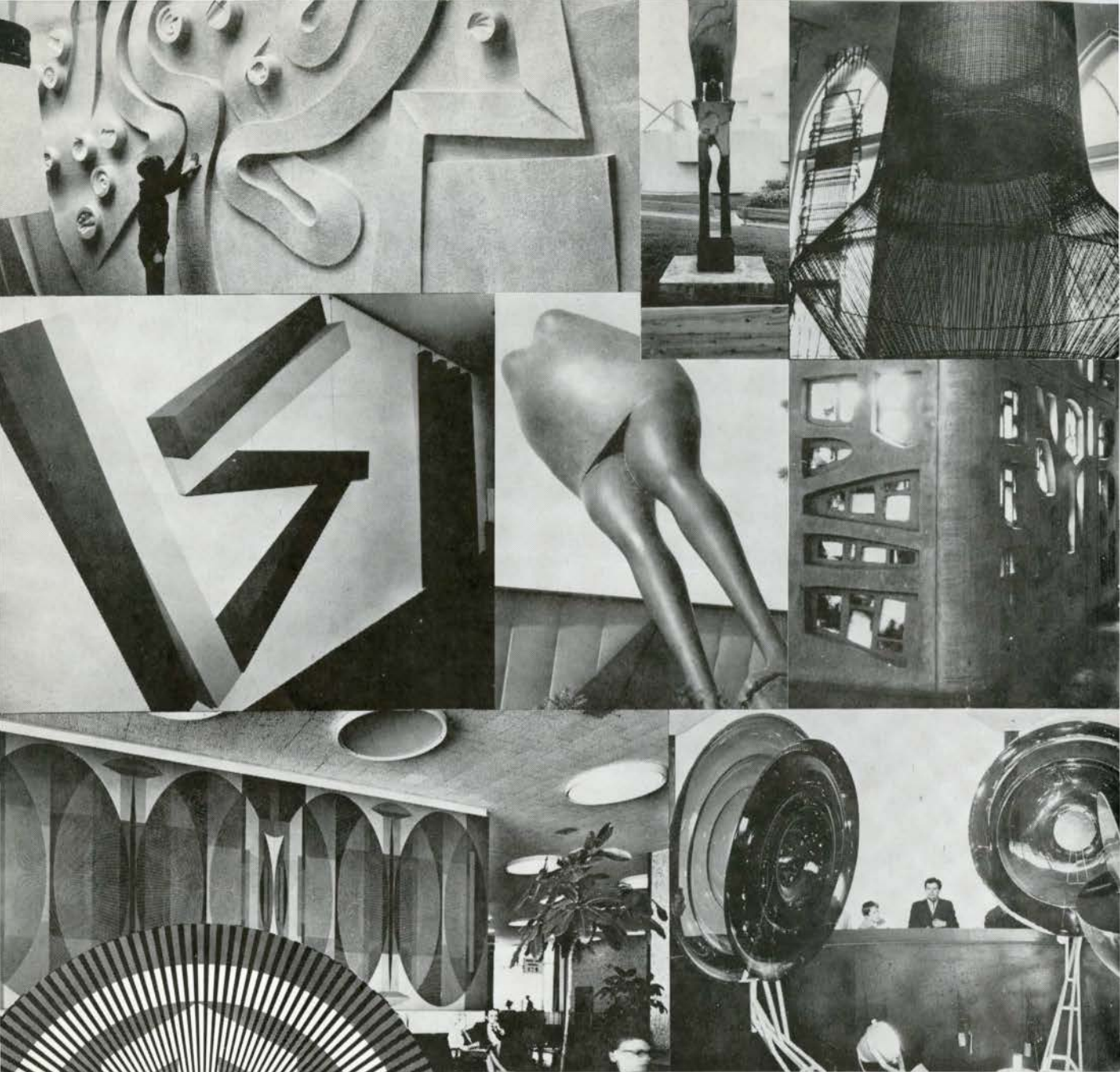
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Jean-Louis Lalonde

PQAA Annual Meeting

Jean-Louis Lalonde succeeded Joseph Baker as president of the Province of Quebec Association of Architects at their Annual Meeting, January 16-18, at Lac Beauport, Quebec. Other officers elected were: Paul Gauthier, first vice-president; George Steber, second vice-president; Michel Barcelo, secretary; Philip Freedlander, treasurer and Joseph Baker, ex-officio. New councillors are Raymond Affleck, Ian Martin, Maurice Desnoyers, Denis Bouchard, Maurice Boutin, Henri Talbot, Marvin Cohen, Louis Faucher, Jean-Louis Caron, and Gaston Martin.

Design Canada Scholarships and Grants

The National Design Council and the federal Department of Industry have announced their program of scholarships and grants to encourage advanced training research and to support the promotion of industrial design in Canada. The program offers scholarships to persons engaged in industrial design for advanced study in Canada and abroad, grants for research projects to persons qualified to engage in research projects directly related to industrial design of importance to Canadian industry, and grants for design promotion to institutes and organizations qualified to sponsor and carry out activities promoting industrial design in Canada. For information contact the Reg-

istrar, Design Canada Scholarships and Grants Program, Department of Industry, Ottawa 4.

DPW Awards of Excellence

Roger Kimble, MRAIC, Victoria and the Public Works design team for the Western Region have won awards of excellence in the federal Department of Public Works program of awards for buildings designed for the DPW. Mr Kimble was awarded for his 16-inch telescope building at Little Saanich Mountain, B. C. (1) and the Public Works team for their gymnasium and chapel for the Assiniboia Indian Residential School, Winnipeg (2). Honorable mentions included the Sir John Carling Building, headquarters of the Department of Agriculture, the Environmental Health Laboratory at Tunney's Pasture, the Canadian Government Exhibition Commission building on Coventry Road, all in Ottawa, and Postal Station "D" in Vancouver.



1



2

RCA 89th Annual Exhibition

The well displayed 89th annual exhibition of the Royal Canadian Academy of Arts held December 7-January 5th in Hamilton is currently at the Edmonton Art Gallery until March 9.



PQAA Poster

Coming Events

Illuminating Engineering Society and Ontario Hydro sponsor "Today's Challenge in Lighting", Canadiana Motor Hotel, Toronto, March 3.

Interior Designers Institute of Manitoba Trade Exhibition, International Inn, Winnipeg, March 25-27.

DBR Air Conditioning and Building Design Seminar, Ottawa - March 24-25, 27-28, Calgary - April 9-10.

"Theatres, Auditoriums and Concert Halls: The Effective Collaboration", Inn on the Park, Toronto, April 11-12.

5th North American Conference on Campus Planning and College Building Design, University of Illinois, April 20-24, 1969.

Specification Writers Association of Canada's 1969 Convention, Inn on the Park, Toronto, April 23-26.

Canadian Institute of Quantity Surveyors, Westbury Hotel, Toronto, May 16-18.

Conference on Single Family Houses, Copenhagen, May 18-22.



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RAIC Think Tank to Analyse Task Force Report

The RAIC Council through its recently formed Committee on Housing has organized and will finance a two day "think tank" to analyse and comment upon the Report of the Federal Task Force on Housing and Urban Development. By the time the members receive this issue the conference will have concluded and hopefully publicity by press and other media will have been released. The decision to hold this conference was made following your president's meeting with Minister of Transport, Paul Hellyer on November 30th. His Department has co-operated by agreeing to make copies of the report available well in advance of the conference. Lloyd Axworthy, Executive Assistant (Housing) to Mr Hellyer, who was actively involved with the Task Force, will address the group prior to the commencement of the "think tank" proper in order to highlight the background to the report, to answer questions, and to explain the Government's future intentions. The overall purpose is twofold; first, to obtain and publish a comprehensive and informed appraisal of the report based upon study in depth; second, to attempt to identify areas of activity towards improved housing which could be implemented immediately by our profession working in concert with the other disciplines represented at our "think tank" session. It is hoped that perhaps three pilot projects will be formed, one in each of the Western, Central, and Eastern (Maritime) regions.

In a sense, specially in consideration of our second purpose, the decision to hold this conference is an immediate response to the one recommendation in the report which specifically singles out our profession and reads:

"Renewed and greater effort be devoted by architects and other professionals to improve housing and urban design in general."

The names and occupations of the definite participants are as follows:

Myer Brownstone, Professor of Political Economy, University of Toronto, Stefan Dupré, Director of the Centre for Urban and Community Studies, University of Toronto, Dr Gerald Carrothers, Dean of the Faculty of Environmental Studies, York University, Dr Alex Murray, Co-ordinator of Urban Studies, York University, Glen Drover and Eileen McIntyre of the Toronto Social Planning Council, Leon Kumove of the Toronto Social and Community Planning Services, Paul Ringer, Project Coordinator for Alexandra Park, Eli Comay of Comay Planning Consultants, Dr Earl Berger, Economic and Social Planning Consultant, Henry Sears, MRAIC and Jack Klein, MRAIC, all of Toronto; Professor Michael Chevalier of the Institute d'Urbanisme, Université de Montréal and Guy Legault, MIRAC, of Montreal; Michael Wheeler of the Canadian Welfare Council, Humphrey Carver, ARIBA, MTPIC, and Bill Teron, developer, of Ottawa; Earl Levin of the Planning Department of Metro Winnipeg and Tony Kennedy, MRAIC, Winnipeg; Gregory Lambros, MRAIC, Halifax; Wolfgang Gerson, MRAIC, Professor of Architecture at the University of British Columbia, Vancouver; R. S. Dorney, Professor of Geography and Planning at the University of Waterloo; Cliff Wiens, MRAIC, Regina; and Jack Alston, Director of Urban and Rural Planning for the Department of Municipal Affairs and Housing, St. John's, Newfoundland.

Norman H. McMurrich

February 2, 1969

"Sessions des Penseurs" de l'IRAC pour l'Analyse du Rapport de la Commission d'Etudes Fédérale de l'Habitation

Le Conseil de l'IRAC a chargé le Comité de l'Habitation d'organiser et de financer deux jours d'analyse profonde se culminant en un commentaire sur le Rapport de la Commission Fédérale déléguée à l'Habitation et à l'Urbanisation. La conférence sera terminée avant le tirage de ce numéro et nous espérons que les résultats auront été publiés par la presse et les autres média. La décision d'organiser cette conférence a été prise à la suite de la réunion de votre Président avec Paul Hellyer le 30 novembre. Son Ministère a fait preuve de bonne volonté en nous faisant parvenir des exemplaires du rapport bien avant la conférence. M. Lloyd Axworthy, Adjoint-exécutif (Habitation) de M. Hellyer, qui a joué un rôle actif dans la Commission d'Etudes (Task Force) adressera la parole aux conférenciers avant l'analyse profonde proprement dite.

La conférence a pour double but d'abord d'obtenir et de publier une évaluation du rapport compréhensive et bien documentée basée sur une étude approfondie et ensuite d'essayer d'identifier les démarches que notre profession devraient prendre immédiatement pour améliorer la situation de l'habitation en travaillant de concert avec les autres professions représentées à notre session d'études. Nous espérons qu'il en sortira trois avant-projets, un dans l'ouest, un autre au centre et le troisième dans la zone maritime de l'est.

Dans un sens, surtout en ce qui concerne notre deuxième but, la décision d'organiser cette conférence est une réponse immédiate à la recommandation dans le rapport qui choisie notre profession en particulier de la façon suivante:

"Qu'un effort redoublé et plus concentré soit accordé par les architectes et autres hommes de métier à l'amélioration de la conception d'habitations et d'urbanisme en général."

Les noms et les occupations des participants sont les suivants. — Myer Brownstone, professeur d'économie politique, University of Toronto, Stefan Dupré, directeur, Centre for Urban and Community Studies, University of Toronto, Dr Gerald Carrothers, Doyen, Faculty of Environmental Studies, York University, Dr Alex Murray, Co-ordinator of Urban Studies, York University, Glen Drover and Eileen McIntyre du Toronto Social Planning Council, Leon Kumove du Toronto Social and Community Planning Services, Paul Ringer, Project Coordinator for Alexandra Park, Eli Comay du Comay Planning Consultants, Dr Earl Berger, Conseiller économiste et sociologue, Henry Sears, MRAIC et Jack Klein, MRAIC, Toronto; Professeur Michael Chevalier de l'Institute d'Urbanisme, Université de Montréal et Guy Legault, MIRAC, Montréal; Humphrey Carver, ARIBA, MTPIC; Michael Wheeler du Canadian Welfare Council et Bill Teron, exploitateur, Ottawa; Earl Levin du Planning Department of Metro Winnipeg et Tony Kennedy, MRAIC, Winnipeg; Gregory Lambros, MRAIC, Halifax; Wolfgang Gerson, MRAIC, professeur d'Architecture de l'University of British Columbia, Vancouver; R. S. Dorney, professeur de géographie et d'urbanisme, University of Waterloo; Cliff Wiens, MRAIC, Regina; et Jack Alston, Director of Urban and Rural Planning for the Department of Municipal Affairs and Housing, St. John's, Newfoundland.

Norman H. McMurrich

le 2 février



1 The spectacular Husky Tower, Calgary, Alta.



2 War Memorial Sports Complex, Acadia University, Wolfville, N.S.



3 The rugged beauty of the Brantford City Hall, Brantford, Ont.



4 Futuristic design for the Saskatoon Centennial Auditorium.

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6 Centennial Concert Hall, Winnipeg.



7 Holy Trinity Church, Ottawa, Ont.



8 The Chateau Lacombe, Edmonton, Alta., a concrete duononegan-shaped hotel.

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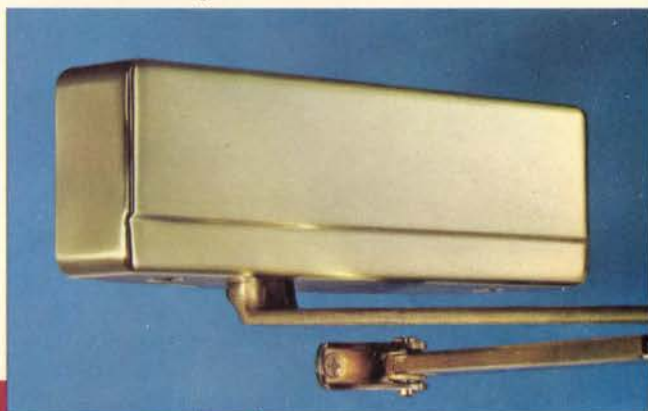
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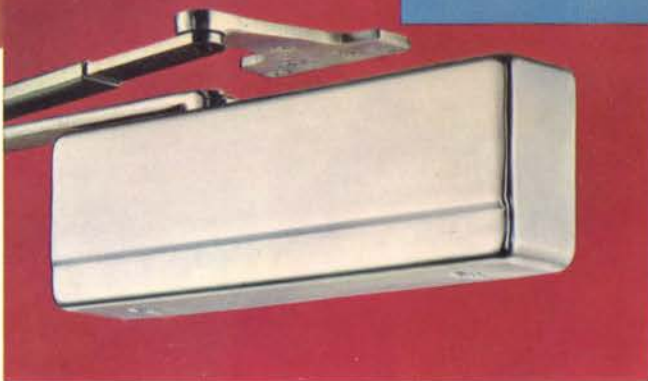


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This parallel-arm application is shown with a dull chrome finish.

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Downtown Toronto glimpses . . .



"Five Columns", by Robert Hedrick, in front of Jerrold Morris Gallery, Prince Arthur Street

"Five Columns", oeuvre de Robert Hedrick exposée devant la galerie Jerrold Morris, rue Prince Arthur



"Emerging Forms", by Bruce Watson in front of Albert White Gallery, Prince Arthur Street, Toronto

"Emerging Forms", oeuvre de Bruce Watson exposée devant la galerie Albert White, rue Prince Arthur, Toronto



Etrog in front of Hart House, University of Toronto

Etrog devant Hart House, Université de Toronto.

Mayor Dennison of Toronto and his Council's decision to accept an equestrian statue (of dubious worth) of Edward VII as a "gift" and spend \$25,000 on its installation has handed Toronto the biggest horse laugh of the New Year – doubtless the rest of Canada is joining in the mirth of Mr Dennison's repeated and graceless public "arabesques" on matters aesthetic. This time his "gift" horse is rather long in the tooth.

However, the more erudite and enlightened lovers of art are wincing at the dilemmas of

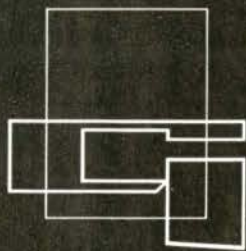
public leaders who on one hand question the gift of a Henry Moore (which nearly lost to Toronto the most distinguished public sculpture yet to grace the downtown area) and later try to redeem their image by accepting a "gift" by an ill-advised public benefactor whose art-buying whims are more personal than informed. Calgary also suffered a similar fate when accepting pompous outmoded bronzes by a similar type of benefactor with more money than art sense who, having collected them from the U.S.A. when cast out by the original owners, inflicted them on general public parkland

instead of his own back yard, the proper place for keeping the results of eccentric collecting.

God knows Canada needs more public benefactors and in particular more gifts of distinguished monumental sculpture. However, when it comes to "gifts" to the nation we have no public attics for the storage of white elephants. Therefore we must be as sensible over art gifts as is the fine arts gallery director and refuse to be morally blackmailed by the gifts of expen-

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sive trivia which at best only feed the ego of the "artless" donor.

Since Mayor Dennison has refused to reconstitute an advisory body to be responsible for City Hall's art doings, we can only hope until the day his office terminates that he concerns himself with his old love "sewerage" before we, in our nightmarish dreams, can see a cavalcade of equestrian statues galloping up the barren corridor of University Avenue.

As a more positive remedy for this unconscious frivolity those who care might collect funds or see that their city purchases contemporary sculpture of world stature and suitable scale to grace the available empty spaces of downtown Toronto.

Instead of spending \$25,000 for a plinth for Edward let's have a "horse of a different color" – a minimal "plinth" by Caro, Tony Smith, Bob Murray or the like for our stable of sculpture.

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Il suffit d'envoyer nom et adresse au Régistrare, 'Design Canada', Ottawa. On vous fera alors parvenir une fiche sur laquelle vous aurez le loisir de consigner tous les détails utiles se rapportant à votre travail et à votre expérience. Ceci constituera votre dossier personnel pour le Répertoire.

N'importe quelle entreprise peut profiter de ce service. Il suffit d'en faire la demande; une liste de designers de même qu'un court énoncé de leur expérience sont alors soumis. Il leur appartient ensuite de contacter l'un d'eux et de conclure à une entente avec lui.

On notera que ce service à l'industrie fera l'objet d'une vaste campagne de publicité.



Rolf Harder, Design Collaborative

Pop... camp... supermannerism... fine
pop... ahrtly pop... superficial visual images
... silly inconsequential... scandalous
... decoration... ducks... free, loose,
cool... new establishment!

We publish two responses to our October issue on Pop Architecture by George Baird, MRAIC, and by C. Ray Smith, an editor of Progressive Architecture, plus an article by Ada Louise Huxtable reprinted from the New York Times.

Comment †

George Baird

Architecture Canada has brought off something of a coup, in publishing Tom Wolfe's "Electro-Graphic Architecture" in its October 1968 issue. And the gesture is all the more intriguing in that it brings to a crucial stage professional awareness of the phenomenon becoming known as "pop architecture".

Recall some recent history. Something has clearly been in the wind since the enormous success of Wolfe's examination of Kustomized Kars, teeny-boppers and Las Vegas, "The Kandy-Kolored Tangerine-Flake Streamline Baby", in 1965. In '66 appeared Robert Venturi's "Complexity and Contradiction in Architecture", an ambitious distillation of such diverse influences as post-Coleridgean literary theory, architectural thought out of the Dutch Forum group surrounding Aldo van Eyck, and American pop art (or "fine-pop" as Reyner Banham would rightly insist, since Venturi chose to discuss Jasper Johns and Robert Rauschenberg, not Claes Oldenburg, let alone Ed Kienholz).

With the appearance of "Complexity and Contradiction", the writing, for architects, was on the wall. Since then, Venturi (with Denise Scott Brown) has taken a step in Wolfe's direction, and has published the notorious piece "A Significance for A&P Parking Lots - Learning from Las Vegas" in the March 1968 *Architectural Forum*. And since that appeared, the pace of publication has constantly accelerated. *Progressive Architecture* has devoted its entire October



1968 issue to "Supergraphics" and "Supermannerism", promising even more on the new "movement". And now, finally, comes *Architecture Canada's* special issue.

The reason I say that it particularly brings the whole phenomenon to a crucial stage is that it points up with a sharpness that has eluded the American publications I have seen, some of the fundamental issues at stake (See footnote*) The first indication of this sharpness lies in the simple fact that their fundamental seriousness has prompted *Architecture Canada's* editors to set Wolfe's piece in their standard graphic format, and it is only seeing a Tom Wolfe piece, with all its built-in tendency to vulgar-baroque, set that way, that shows just how cool a format the magazine has.

Looking at Wolfe's piece itself, further questions arise. It is an ode to commercial neon, most especially to a 105 foot high Buick sign in San Diego "... Each letter of Buick is on a baroque rocket... The lights work in a series... In phase 2 the rockets light up orange and yellow... They shoot off red jet flames... They take off to the left... A terrific rush of light shoots up the main stem there, the big parabola... It explodes in the crazed atomic nucleus at the top... it's insane!... It's marvellous!"

Wolfe uses the sign's designer, Melvin Zeitvogel of the California Neon Co. as a stick to beat the issue of *Progressive*

Architecture, just mentioned, as well as *Domus*, Dan Flavin, Martial Raysse, Robert Rauschenberg, Robert Whitman, the Bauhaus, Mies, Corbu, etc. Zeitvogel's "secret" according to Wolfe, is that he doesn't lose any sleep over whether he is an artist; "none of the great sign artists seem to lose any sleep over that... They're free souls! The hell with art history!" Yet after this plea for a creative stance free of the awful fruit of the tree of art-historical knowledge, Wolfe ends up calling for "the new book, now, fast, on the most lavish coated stock \$18.50 a copy, called *Beyond Modern Architecture*, featuring... well, for a start, Melvin Zeitvogel..."

The virginal Zeitvogel, it would seem, is on the point of being raped by his own discoverer! I wonder whether we should take this as whimsical muddleheadedness, or cynical hypocrisy, on Wolfe's part. Either way, it seems to me that some second thoughts are called for. We have, after all, seen that Wolfe's ample condemnation even

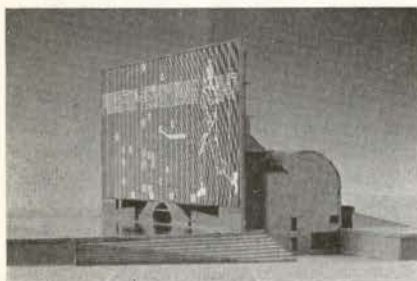
"It should be said that putting it this way takes no account of the important and extremely suspicious English reaction to 'Complexity and Contradiction', a reaction which aptly focusses on the profound concessions Venturi makes on page 52 of the book: 'The architect who would accept his role as combiner of significant old clichés - valid banalities - in new contexts as his conditions within a society that directs its best efforts, its big money, and its elegant technologies elsewhere, can ironically express in this indirect way a true concern for society's inverted scale of values'. Profound concessions indeed, for a book that claims to be a 'manifesto', even if a 'gentle' one as Venturi insists. And strikingly enough, an exactly parallel paragraph occurs in the 'Las Vegas' article: 'Las Vegas is analysed here', Venturi and Scott-Brown tell us near the end of the argument, 'only as a phenomenon of architectural communication; its values are not questioned. Commercial advertising, gambling interests, and competitive instincts are another matter... this is a study of method not content. There is no reason, however, why the methods of commercial persuasion and the skyline of signs should not serve the purpose of civic enhancement. But this is not entirely up to the architect'."

†Authors note: This text was prepared for the "journals review" section of The Canadian Architect but was not published there for reasons of editorial policy.

"Supermannerism is witty as well as wildly sense-awakening . . . call it part of the state of revolution that seems to be the condition of our age"

applies to parts of the movement this issue purports to summarize. Would the format his article has been given by *Architecture Canada* escape his contempt? What would he think of the editors' concluding exhortation that "architects . . . develop an understanding of this culture that goes beyond its superficial visual images." (my italics, G.B.)

If Wolfe is right, then the culture lies precisely in its superficial images; any attempt to go beyond them is pretentious nonsense; indeed, on this argument, Wolfe's pieces most sensibly will appear not in journals like *Architecture Canada*, but rather in ones like the *American Neon Manufacturer's Annual*. If, on the other hand, he is wrong, and an attempt to go beyond those images is appropriate, then, so far as architects are concerned, he and his sententious opinions are just red herrings.



That this is really true, is, I think, borne out in another of the issue's features, a presentation of Venturi and Rauch's and Gerod Clark's competition scheme for the National Football Hall of Fame. Here we see Venturi as his best, safely freed of the difficult moral issues often entailed in more orthodox commissions, yet responding to the particular program with what, in view of the larger vision of architecture his polemics can imply, might almost be admired as straightforwardness. In fact, the scheme makes it perfectly clear to me that we needn't get involved in Wolfe's elaborate question-begging at all, nor even, for that matter fall back, as Venturi does here, on Ruskin "architecture is the decoration of structure" and Pugin "it is all right to decorate construction, but never to construct decoration". The point, as Joseph Rykwert has simply said, is that "the whole of environment, from the moment we name it and think of it as such, is a tissue of symbolic forms". (*Arena*, the Journal of the Architectural Association, June 1967.)

Kicked a Building Lately?

By Ada Louise Huxtable from January 12, issue of the *New York Times*

We have resolved this year not to be buffeted from one city crisis to another, but to write of other matters also; for one thing, what is happening in the world of architectural esthetics as well as in the world of urban emergencies. Since this resolution is obviously to be broken immediately, let us plunge in and sum up some current trends in the arts of design before the real estate interests succeed in breaking down New York's protective side street zoning, for example, so that no small buildings or historic houses remain and the new densities make the urban sky fall-in.

It is not easy to think about design theory or practice in the face of things like that. But this does not minimize the importance and excitement of some of the current architectural activities of the younger practitioners and students, or reduce the temptation to take a stab at what the new trends mean.

Most architects are quite aware of a new kind of design called Supermannerism or Supergraphics, particularly if they read *Progressive Architecture*, the periodical that has done the most to name, promote, explain and analyze it. Violently pro or con the new style, their battle lines are drawn to suggest one more evidence of the generation gap.

To the public, Supermannerism is best known in its more psychedelic entertainment or showcase aspects – the multi-media, sound-reinforced, flashing patterns of color and light in designs by the young, for the young, in discotheques and boutiques. It is largely an art of interiors and graphics.

But it is also turning some of the more "with it" architectural schools upside down. Yale architecture students agitated until their notably Supermannerist dean, Charles Moore, aided in the temporary destruction of one of the major areas of Paul Rudolph's Art and Architecture Building. They installed a pulsing white light display of fluorescent tubing and silver mylar for a space and mind-bending esthetic experiment and design *double entendre* that practically told

Mr Rudolph to get up on the shelf and stay there.

When young architects do something like The Drugstore in fashionably mod King's Row, Chelsea, it reverberates around the design world until it becomes a cliché. More impressively virtuoso interiors in the same idiom, such as Sergio Asti's incredibly suave tricks with mirrored walls and lights, transparency and reflection in a tiny shoe shop in Milan, are less well publicized.

At its worst, the style is superficial, tricky, repetitive and shallowly ornamental, overusing bright metallic surfaces, plastics, curved corners and liverish colors ad headache and ennui. But at its best, it is considerably more than that. In the words of C. Ray Smith in last October's issue of *Progressive Architecture* – devoted entirely to the style (with irate cancellations from architect-readers who consider it rubbish) – the movement is "a rebellious attempt to expand experience by breaking down the traditions of the Establishment." It has been called LS-Design.

The traditions of established modern architecture are order, meticulously proportioned lines and spaces, sensitively utilized color and puritanically austere style. All this is broken down deliberately. Basic shapes and spaces are denied and insulted by Dayglo-bright designs of hard-edge geometry that cross right over windows and doors with consummately calculated arbitrariness in stripes, circles and abstractions. Existing elements are further fragmented by applications of mirror and mylar, and dematerialized by light and kinetic effects. They are distorted by diagonal and bias installations and the deliberate camouflage of other materials. Lettering is larger than life-size, suggesting an architecture of its own. "Environments" are created independently of their surroundings.

The results range from godawful to the genuinely revelatory expansion of visual and sensuous experience. Like all other styles that are primarily decorative and responsive to a particular moment in time and taste, this one will quickly be run into the ground. It happened with Art Nouveau, which ranged from the sublime to the atrocious and died of overexposure and overreaching after a

very short life-span. That one took half a century to be properly evaluated as more than slightly reprehensible, dismissable surface decoration. This one is being similarly pigeonholed by those who should know better

. . . Supermannerism is witty as well as wildly sense-awakening. This is not without significance at a time when black humor is the response to the grotesqueries of the bitterly self-defeating complexities of 20th-century civilization. Maybe it is a form of black art. It is as volatile and fragile as revolution. Call it part of the state of revolution that seems to be the condition of our age.

What is upsetting the older professionals is that the style is an architecture-destroyer – and what is destroyed, or mocked, is their architecture. What is even more upsetting, if anyone cares to face it, is that there is good reason for this. Look at any of the slick renderings of big building complexes by the big architectural offices. That one of Madison Square Garden and its companion office tower, for example, that was kicking around in ads for quite a while, looking like something dispensed from a machine, or like a giant can of tuna and box of crackers (tear off the box top and get Irving Felt). Or take any of those board-room table-model models of new Sixth Avenue skyscrapers or big new commercial or cultural structures reproduced in newspapers and magazines. A wretched excess of computerized lookalikes. Predictable banality on a supercolossal scale. Overwhelming square footage of nothing.

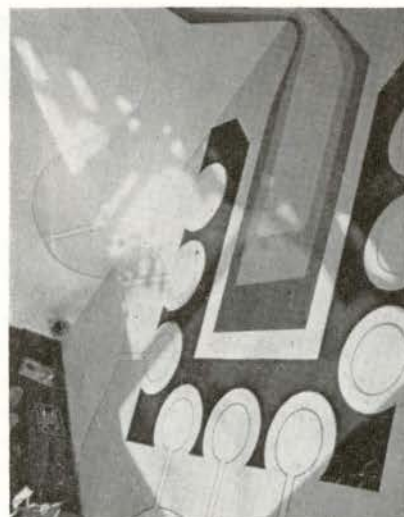
There is an impulse to kick them (ever tried kicking a building?) or to picket them (that has actually been done). Even much of the better work today has turned into a kind of Ikebana ritual of approved proportions and sterile relationships. What is really happening is that the upcoming generation, full of beans, talent, revolt and defensible disrespect for the tasteful totems and the huge, hack symbols of the Establishment, is giving them a highly creative raspberry. You could call it productive protest.

For this is not nihilism, in spite of its blithe self-advertisements to that effect. It is a style going somewhere even if it is to a straight

dead-end. That won't matter, because in the process it will have opened important new doors of vision and experience. It is a way of breaking out of the depressingly minimal spaces and formulas that are laughingly called architecture in the name of today's economic pressures and expediency. It is the return of ornament, if you will, or an equivalent decorative enrichment, banished by Adolf Loos and the early modern movement as "crime". It is the contemporary integration of the arts so falsely sought in more traditional terms, with the architect closer to the visual arts than he has been in a very long time.

Most important, it is the addition of still another useful tool to the architect's equipment, for, with the rest of us, he will never see the world in quite the same way again. Nor should he, because it will never be the same world again, and that is the truth behind the generation gap everywhere.

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Supergraphics from October P/A

Comment

Congratulations on your eclectic assemblage of materials discussing and illustrating "Pop Architecture" (*Architecture Canada*,

October 1968). That term, incidentally, has been ascribed to Gerod Clark, an associate of Venturi & Rauch, but I begin to wonder if it might not more properly be called "Camp Architecture".

Your facsimile of a Doug Michels envelope and your reproduction of the Michels/Feild verbal map of the Georgetown waterfront (originally printed in pink day-glo on white) are convincing evidence that Michels is one of the truly original graphics artists of our day.

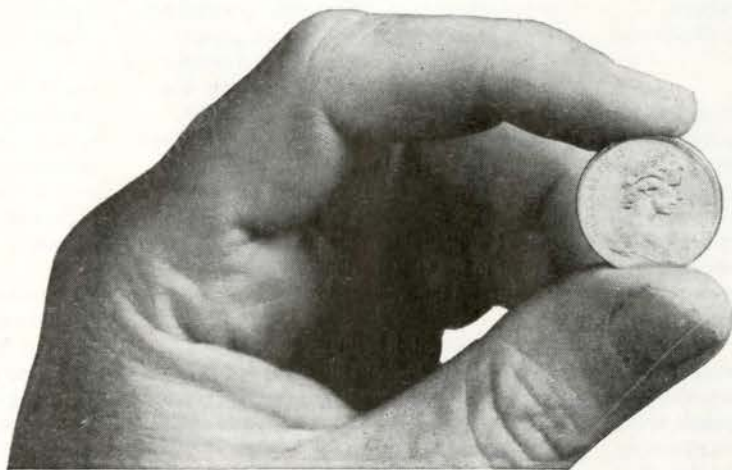
Your own comments about the "superficial visual images" that interest the new generation and Tom Wolfe's concern that anonymous pop is more vital than "Fine Pop" (meaning Ahrtly Pop) may be less important than the fact that by publicizing the works of this new breed and by explaining them in their own terms both *P/A* and *Architecture Canada* have legitimized their investigations, turning them into the New Establishment.

My own concerns about this disservice have made me think that it might have been more of a favor to those designers if critics had roundly trounced their creations as silly, superficial, inconsequential, and scandalous. That might have given them all something to crusade against – for the next ten years, a crusade that might have led to further, really meaningful expressions with their techniques. Now, with the wind out of their revolutionary sails, they may not have a new direction for years.

Actually, these concerns already appear to have been unfounded. Students who are working with Supergraphics now seem to lose interest in the middle of a second go around; they stop. But they appear, in fact, to be going on, having successfully *included* decoration within the design vocabulary again, to search for a truly meaningful synthesis of all the elements of what I have called Supermannerism that will at last make "free loose and cool" – random – human functions the true determinants of organized designs. We'll have to wait to see if they make it.

C. Ray Smith
Associate Editor, *Progressive Architecture*

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L'avenir du Centre commercial de Toronto

N. H. Richardson

Il y a cent ans Toronto n'était qu'un village au bord du lac avec ses banlieues juste au-delà des rues York, Richmond et Parliament. Front Street portait son nom à just titre car en cette époque elle longeait le port et faisait face aux îles.

Plus tard, les voies ferrées ont été construites sur remblai envahissant la plage. La Commission du Port de Toronto a continué le remblayage séparant de plus en plus le Port et la Ville. L'autoroute Gardiner Expressway a accentué cette séparation et la ville d'aujourd'hui à le dos tourné vers le lac, toute exploitation se dirigeant vers le nord.

La vaste étendue de remblai en bas de Front Street est devenue un terrain vague, la propriété des deux chemins de fer nationaux et de la Commission du Port de Toronto. Ces trois derniers avec la collaboration d'un exploitant particulier viennent de publier trois projets énormes qui pourraient transformer non seulement cette zone mais tout le centre-ville. Sous les noms de "Harbour City", "Metro Centre" et "The Campeau Harbour Square Development" pour identifier l'orientation des activités, les trois projets ne sont qu'une seule exploitation prolongeant la zone financière vers le sud, créant un centre de communications et d'émissions T.S.F., un centre de transport public et un développement commercial au sud de l'esplanade reconstituée. La quartier tirerait parti de la vue sur le lac à partir du terrain des expositions jusqu'à l'entrée du port à l'est.

Le carrefour King et Bay sera pour longtemps le centre des affaires quoique d'ici 20 ans il pourrait y avoir plus de 8,000,000 pieds carrés de bureaux au sud de Front Street et l'exploitation du centre-ville pourrait se concentrer dans cette zone plutôt qu'autour de l'Hôtel Toronto telle qu'on l'aurait cru autrefois.

Avec la mort du projet Eaton et la migration du centre-ville les bâtiments d'administration, les hôpitaux et les instituts avoisinants pourront s'étendre vers Bay Street. Il est à peu près certain que les centres d'achats continueront de s'accroître sur Bloor Street dans les quartiers de Bay et Yonge. Il est donc peu probable que le nouveau Centre Métropolitain provoque le marasme au nord de King Street.

La reconstruction des zones vers Jarvis Street de Front à Bloor et vers University Avenue et Queen's Park est incertaine mais il est bon de se réserver quelques zones grises et il est tout aussi souhaitable de conserver les quartiers typiques tels que le Village de Gerrard Street et des boîtes de nuit, bouquineries et petites boutiques de Yonge Street. Ces quartiers doivent leur ambiance à certains vieux immeubles qui méritent d'être conservés aussi longtemps que possible. Une étude actuellement en cours déterminera le caractère du quartier O'Keefe-St. Lawrence Centre. Espérons qu'elle trouvera le moyen d'y amener une vitalité qui attirera le peuple vers le centre des arts.

Les urbanistes de la ville de Toronto proposent la séparation de circulation de piétons et de véhicules dans le centre. Ceci serait essentielle pour améliorer l'exploitation chaotique des propriétés dans le quartier Richmond-Victoria-Wellington-York. La coordination des passages couverts pour piétons et des moyens de transport est la clef de l'avenir des villes modernes. C'est ce qui doit caractériser l'urbanisation vers le lac Ontario.

La greffe d'un secteur tout neuf sur un centre foncièrement établi présente une occasion sans précédent de créer une ambiance bien intégrée aux besoins d'aujourd'hui tout en donnant une nouvelle vigueur au vieux centre. Espérons que les deux sauront se compléter car le charme du hasard et les liaisons historiques de la vieille ville ne peuvent être recréés pas plus que l'élégance et la discipline du nouveau quartier peuvent être surimposées sur la vieille ville. L'étude

de l'amélioration de la vieille ville est donc aussi importante que celle qui est nécessaire à la création d'un nouveau quartier.

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Recueil de Documentation Notariale sur les Bâtiments Coloniaux Français en Amérique du Nord

A. J. H. Richardson

C'est dans les dossiers de notaires que l'on découvre l'histoire de l'architecture car les architectes n'ont conservé que très peu de documentation écrite. Depuis l'époque de Philippe le Bel, la France a toujours documenté toute transaction d'affaires par marchés notariés et la pratique de cette habitude dans les pays francophones nous a permis de trouver beaucoup de renseignements sur le Canada et la Nouvelle Orléans.

Québec eut son premier notaire en 1620. Un notaire enrégistra une description de la maison de Louis Hébert en 1639 dans ce qui fut probablement le premier marché de construction au Canada. Le document fut rédigé par deux constructeurs et il porte la marque d'un charpentier. En 1640 le marché de construction donnait déjà quelques dimensions. En 1648 l'accord de construire préparé pour la première église de Trois-Rivières comprenait un descriptif de la charpente en termes techniques assez précis. Vers 1660 les documents étaient beaucoup plus raffinés. En 1680 ils dépassaient 1,000 mots et souvent le devis était annexé séparément. Un marché de 1672 à Lachine comprenait un plan du bâtiment. Le charpentier François Boivin avait fait faire une maquette de l'église des Ursulines de Québec avant de signer le marché. Vers la fin du 17^{ième} siècle le client faisait signer des marchés par plusieurs artisans et la tradition d'un vocabulaire fut fondée. On parlait déjà de dépôt, cession, désistement, annulation, cassation, quittance, décharge, etc.

Des "conventions" ou des "accords" sur des points de litige contenaient souvent une description précise d'un bâtiment. Les actes de ventes, les inventaires pour succession,

les expertises, les toisés, les procès-verbaux et bien d'autres "contrats" donnaient souvent des descriptions architecturales. Il doit y avoir environ 200,000 documents dans les dossiers des notaires des 17^{ième} et 18^{ième} siècles en Amérique. Parmi ces documents il y a peut-être 6,000 contrats dont la moitié traite de bâtiments. En plus il doit y avoir de 2 à 3,000 autres documents de valeur architecturale. En 1730 il a été décrété que tout document notarié soit copié pour les archives de l'administration légale. L'administration de la Nouvelle Orléans, étant plus rapprochée à la France par le commerce, a produit des documents plus complets et pendant une période qui a duré plus longtemps.

Plus loin, dans le pays des coureurs de bois, Détroit n'a que très peu de dossiers de notaires, mais, par contraste Kaskaskia a eu 14 notaires dans la période de 1719 à 1800 qui ont produit plus de 3,500 documents parmi lesquels on trouve une soixantaine de devis concernant des constructions. A St. Louis, un des notaires habitait une maison ayant 66 pieds de façade – donc les affaires étaient bonnes!

Le service des archives au Bureau des Sites Historiques Canadiens est en train d'incorporer sur carte-fiches tout renseignement sur les hommes de métier et les architectes canadiens. Ces renseignements sont tirés en grande partie des marchés et des biographies de l'époque. Vers la fin du 17^{ième} siècle le "maître maçon" devint architecte et en 1690 on comptait 6 architectes à Québec. Une guilde de charpentier s'était déjà formée à Québec en 1659 et ses maîtres menuisiers devinrent des architectes.

Il est intéressant de noter aussi que le transfert de propriété immobilière occasionné par la mort enrégistrait souvent, avec autant de détails dans un même procès-verbal, la fin violente du propriétaire aux mains des Iroquois et l'inventaire de la propriété.

Page 51 Concepts de Murs Extérieurs Recemment Utilisés au Canada

R. T. Affleck

Ce traité explique, en résumé, l'emploi des principes les plus récents pour la construction des murs extérieurs dans des climats nordiques rigoureux.

Durant les dix dernières années et avec l'aide inestimable du Conseil National des Recherches, nous avons développé le principe de «l'écran-de-pluie». Ce principe se base sur les dernières découvertes qui ont prouvé que le facteur déterminant de la «barrière climatique» n'est point le climat extérieur parvenant à pénétrer, mais plutôt le climat intérieur à s'enfuir.

Le mur extérieur se composera donc, généralement, de deux parois, intérieure et extérieure séparées par un espace d'air et ce, comme suit:

1. La paroi intérieure, étant la vraie barrière climatique, est recouverte à l'intérieur par le coupe-vapeur et à l'extérieur par l'isolant thermique, ce dernier, par conséquent, englobant toute la structure dans un même climat intérieur.
2. La paroi extérieure est un écran ouvert et aéré, servant de bouclier à la paroi intérieure ainsi qu'à l'isolant thermique contre les intempéries, tout en procurant l'élément visible de la façade.
3. L'espace d'air entre les deux parois a le même climat que l'extérieur, autrement dit, même pression et est drainé vers l'extérieur.

Malgré le fait que la paroi intérieure est supposée empêcher toute fuite vers l'extérieur, il arrive inévitablement que certaines fuites se produisent à cause de la pression positive générée par les systèmes de conditionnement d'air. Cet air hautement humidifié, arrivant dans l'espace d'air, se trouve immédiatement, exposé au climat extérieur et peut facilement quitter le système à travers

les joints ouverts de la paroi extérieure. Si ce même air s'était trouvé emprisonné par un système de joints extérieurs hermétiques, il se serait condensé sous forme d'eau ou de glace, causant ainsi de sérieux dommages au mur.

Le principe de l'écran-de-pluie peut aussi être appliqué dans le cas d'un mur à paroi unique et ce, en concentrant les fonctions caractéristiques du principe dans le joint même des panneaux préfabriqués.

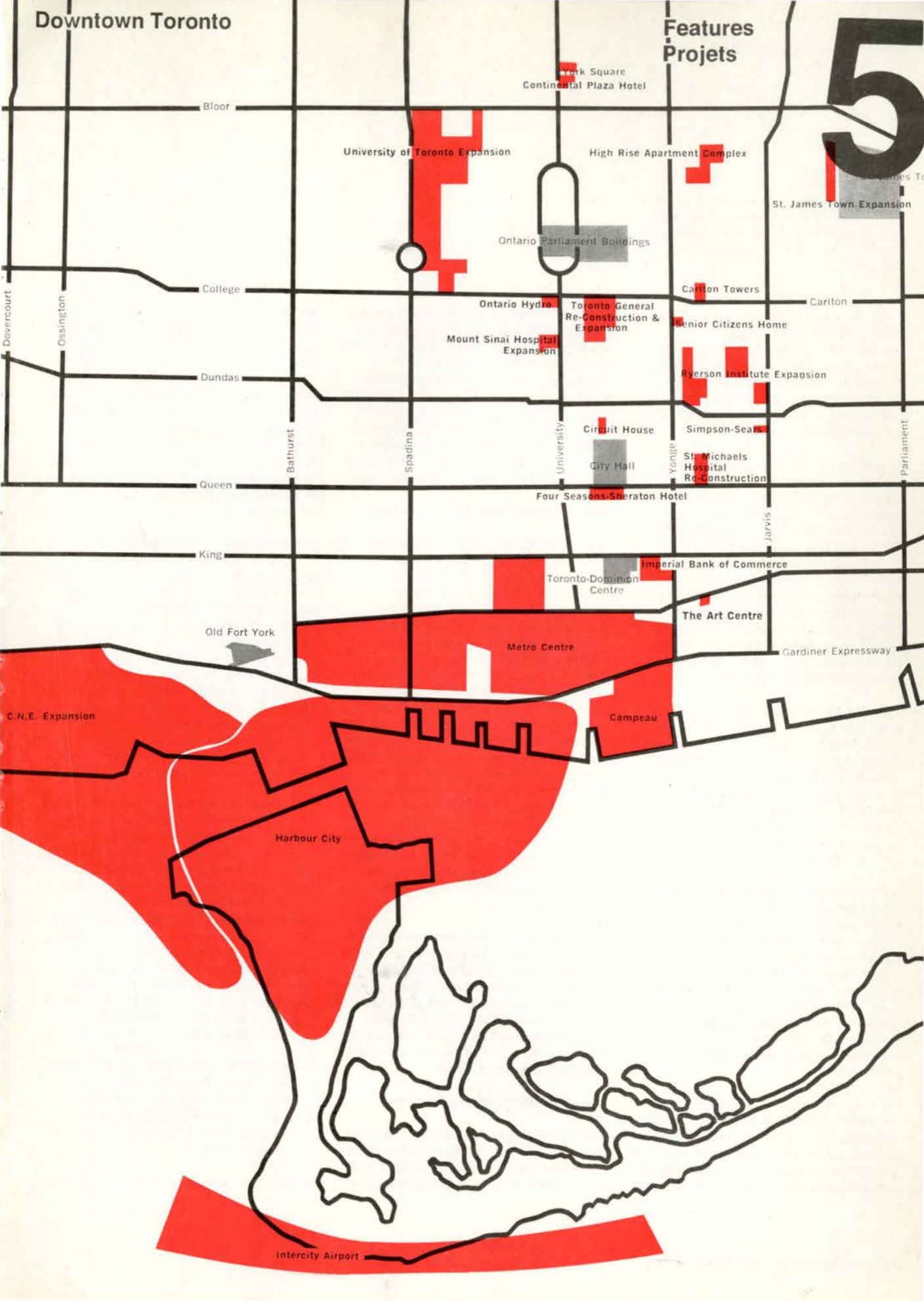
Nous citons quatre édifices dont les murs extérieurs ont été conçus suivant le principe de l'écran-de-pluie:

- a) Le Place des Arts, Montréal, Québec.
- b) La Place Bonaventure, Montréal, Québec.
- c) Le Centre Culturel, St. Jean, Terrebonne, qui sont des exemples de murs extérieurs à double paroi, et
- d) L'Édifice Stephen Leacock, Université McGill, Montréal, Québec qui, lui, est un exemple de mur extérieur à paroi unique.

Downtown Toronto

Features Projets

5



York Square
Continental Plaza Hotel

University of Toronto Expansion

High Rise Apartment Complex

St. James Town Expansion

Ontario Parliament Buildings

Bloor

College

Carlton Towers

Carlton

Ontario Hydro

Toronto General
Re-Construction &
Expansion

Senior Citizens Home

Mount Sinai Hospital
Expansion

Ryerson Institute Expansion

Dundas

Circuit House

Simpson-Seals

Queen

City Hall

St. Michaels
Hospital
Re-Construction

Four Seasons Sheraton Hotel

King

Imperial Bank of Commerce

Toronto-Dominion
Centre

Old Fort York

The Art Centre

Gardiner Expressway

Metro Centre

C.N.E. Expansion

Harbour City

Campeau

Intercity Airport

The Future of Downtown Toronto

N. H. Richardson

As Staff Consultant with the City of Toronto Planning Board Mr Richardson was closely associated with the Board's "Plan for Downtown Toronto". He later entered private practice.

A century ago, Toronto was a rather small waterfront town whose "suburbs" lay beyond York, Richmond and Parliament Streets. Front Street in those days justified its name, for on its south side was the harbour, defined by the Islands — really a peninsula then, for the Eastern Gap had not yet been opened.

Fortunately or unfortunately, depending on one's point of view, the filling of the shallow waters of the harbour offered a relatively easy means of bringing the railways to the heart of the town. First a single line, eventually vast yards, were inserted between Front Street and the water. Continued filling by the Toronto Harbour Commissioners after the First World War created a desolate plain, much of it unused, south of the railway lines. The city and its harbour grew further and further apart. After the Second World War the separation was emphasized by the building of the Gardiner Expressway.

Thus, the fast-growing city turned its face away from the lake. The central area developed north and west — shopping along Yonge Street, financial and other offices along Bay and later, University Avenue. With the impetus of the first subway line — built, significantly, northward from Union Station — the nuclei of important retail and business concentrations began to develop well to the north of "downtown".

But the filling of the harbour had left a very large tract of under-used land in a location which was, as the city grew, increasingly strategic and valuable; and most of it was owned by the two national railways and by a public body, the Toronto Harbour Commissioners. These three and a private developer have now produced plans for three projects of a scale great enough to affect the structure of the whole inner sector of the metropolitan area if they come to fruition.

We may usefully consider the THC's "Harbour City", the CN-CP "Metro Centre" and Campeau Harbour Square Development not as separate projects, but as three major use groupings. The first comprises an extension of the financial district south of Front Street

and east of Simcoe; a communications and broadcasting area west of Simcoe Street; and a transportation centre and a convention and trade centre south of the reborn Esplanade. To the south and west will be a completely new residential area comparable in scale to a fairly large town, with its own town centre, and finally, extending from the enlarged Canadian National Exhibition to the Eastern Channel, will be a belt of water-oriented parkland and recreation facilities.

Face of Toronto Again Toward the Lake

In terms of the general development pattern of central Toronto, the significance of the three projects lies chiefly in the fact that they will reverse the trend of the last hundred years and turn the face of the downtown area again toward the lake. Something like 100,000 people will be housed where almost no-one lives at present. About eight million square feet of office space (enough to accommodate downtown Toronto's needs for perhaps twenty years), together with other important centers of activity, will come into existence south of Front Street. The focal point of the financial district will, however, be firmly anchored to King and Bay Streets by two more large development projects, the Toronto-Dominion Bank's "Toronto-Dominion Centre", now nearly finished, and the new "Commerce Court" of the Canadian Imperial Bank of Commerce, with some three and one half million square feet of office space in total.

To complete the current downtown picture, we must add the St Lawrence Centre, which, with the adjacent O'Keefe Centre, will provide a "cultural complex" of three auditoria and related facilities just east of the financial district; and the Four Seasons Sheraton Hotel development which will complement the new City Hall and its square with a large hotel plus shops and offices.

Massive Development South of King

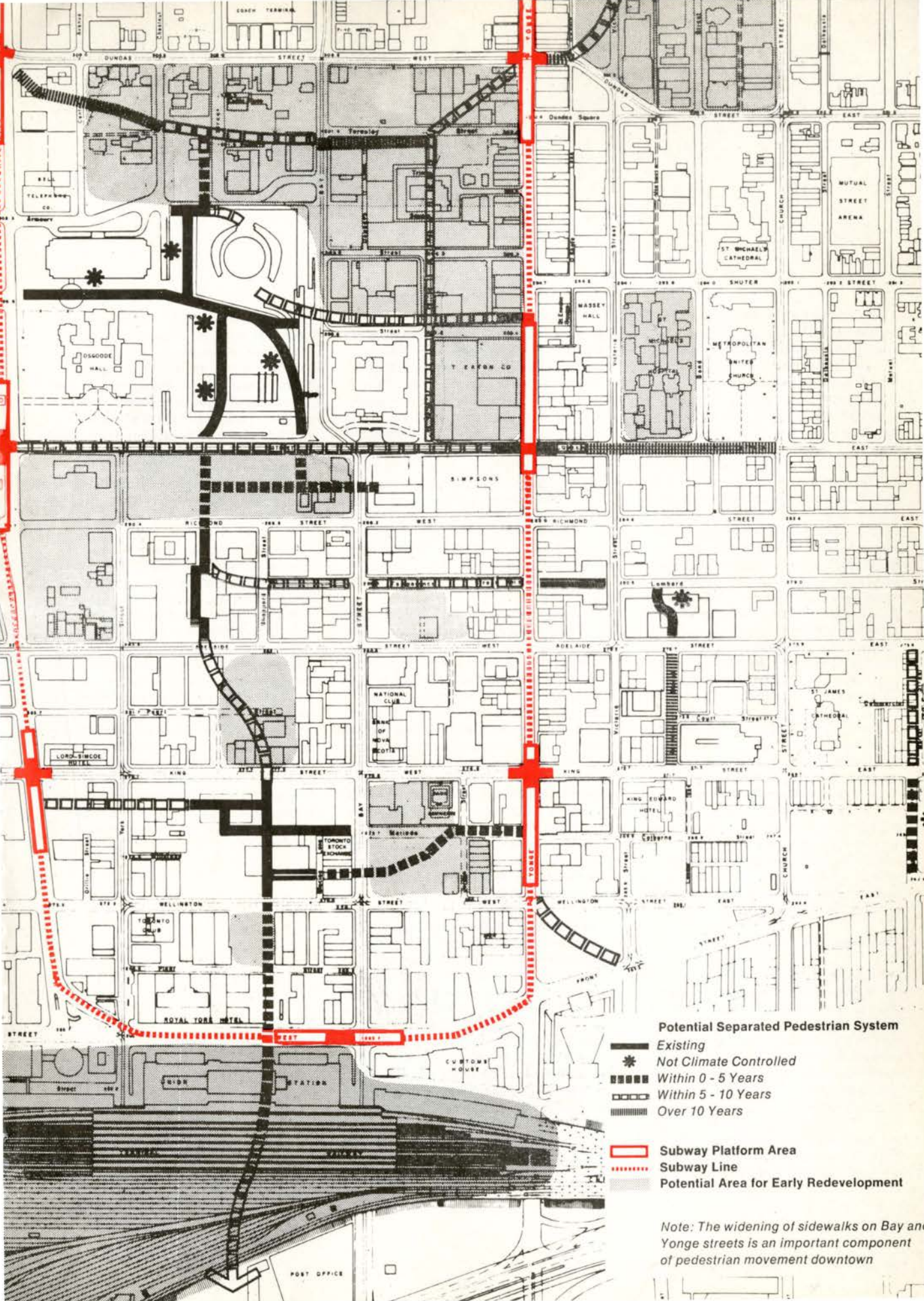
It is striking that all this massive amount of new development, with the single exception of the Four Seasons Sheraton project, will take place south of King Street. Yet only a

few years ago it was confidently anticipated that the growth of "downtown" would be generally northward, circling around the City Hall and filling in the area north of Wellington and west of Bay. The core and the crown of this new development was to be the giant Eaton Centre retail, office and hotel complex. But the Eaton Centre is defunct. If the newer schemes do not share the same fate, what is going to happen to the area which so recently was regarded as merely lying fallow preparatory to producing a crop of tall new buildings?






Part of the answer lies in the expansion of public and institutional buildings. To the west, by hospitals on University Avenue and the nearby Art Gallery of Ontario, the City Hall to the south, Ryerson Institute and St Michael's Hospital to the east, will all be using more land in the fairly near future. Further north still, on the other side of College Street, the provincial government and the University of Toronto are moving steadily towards Yonge. North again, we may expect to see the creation of at least two large commercial developments providing significant office and retail sub-centres on Bloor Street at Bay and Yonge.




So we need not fear massive stagnation from Queen Street to Bloor; but there are parts of this area, nevertheless, whose future remains an open question, notably the large Eaton's holdings between Bay and Yonge with their aging and increasingly obsolete buildings. Will Eaton's store remain at Queen and Yonge? It would not be an easy decision to forsake the traditional location adjacent to the financial district and the symbiotic relationship with its competitor, now completing a large modernization and expansion program; but the glamour and accessibility of Bloor Street must be a not inconsiderable temptation when a rebuilding program is in any case inevitable. Such a move would decisively shift Toronto's retail centre of gravity from "downtown" to "uptown", with the demise of the Eaton Centre and the new southward swing in downtown growth, it must be considered at least a possibility.

There are several other parts of the central



Potential Separated Pedestrian System

-  Existing
-  Not Climate Controlled
-  Within 0 - 5 Years
-  Within 5 - 10 Years
-  Over 10 Years

-  Subway Platform Area
-  Subway Line
-  Potential Area for Early Redevelopment

Note: The widening of sidewalks on Bay and Yonge streets is an important component of pedestrian movement downtown

area bounded by Bloor, Jarvis and Front Streets and University Avenue-Queen's Park whose future cannot now be foreseen with any clarity. This is as it should and must be, for it is such interstices, often miscalled "grey areas", which allow for flexibility in urban growth and in which many vital urban activities take place. The Gerrard Street Village, the cheerful mixture of night clubs, movie theatres, surplus stores, book stores and boutiques on Yonge Street from Dundas to Bloor – these, dependent as they are on old buildings and low rents, are among the most enjoyable parts of Toronto, and heaven forbid that they be replaced by office or apartment towers before they must. The same may be said of several stretches of street between Yonge and Jarvis, from Front Street north to Carlton. An urban renewal scheme is currently being prepared for the southern part of this area; it is to be hoped that it will provide for the retention of some of the interesting old buildings near St Lawrence Hall and perhaps do something to mitigate the rather isolated and sterile character of the O'Keefe Centre-St Lawrence Centre combination. (What really, is the justification for these culture compounds, other than gratification of architectural ambition and some minor operating efficiencies? If we wish the arts to be a part of daily life and not just a cult for an aloof minority, should not their homes be in the midst of everyday activity? Is a 300-yard walk in high heels and a winter night to the nearest subway entrance the way to "bring culture to the people"?)

The Future of the Financial Core

But a question of more moment relates to the future of the present financial core itself – let us say the area bounded by Richmond, Victoria, Wellington, and York Streets. It is too firmly anchored by the new developments at King and Bay and by other large modern buildings to yield its place in the foreseeable future, but the haphazard and generally rather drab patchwork of unrelated buildings, streets and parking lots will inevitably suffer by comparison with Metro Centre and Harbour Square if their promise is fulfilled. Wholesale redevelopment

is out of the question, and cost, limits on demand and fragmented ownership will prevent a steady succession of Toronto-Dominion Centres and Commerce Courts. The recent Central Area Transportation Study and City Planning Board proposals promise some relief from traffic and even the reservation of some streets for pedestrians as part of a comprehensive downtown walkway system, at, above and below the surface. The separation of people from vehicles, and the gradual reshaping of the old core into a more convenient and pleasant environment for the pedestrian, such as is taking place in Montreal, is the key to its future and to its relationship with its new and elegant offshoot to the south.

The integration of all forms of transportation, including the feet, with each other and with the functional elements of the City – living, working, playing – is in turn the key to the future of cities, and this is perhaps the most significant feature of the Harbour City – Metro Centre – Harbour Square complex. A new island airport, long distance and commuter trains, interurban and local buses, freeways and parking space, will all be linked by rapid transit with each other and with an independent pedestrian system. This is the way city building must happen in the future (but may we hope that the Toronto Transit Commission will take a lesson from Montreal's Métro and build stations that are not sterile caverns served by hopelessly inadequate ratholes?)

This grafting of a totally new, large city sector on to an established and vigorous metropolitan core really represents an unprecedented opportunity, not only to create an urban environment consistent with new needs and new possibilities, but also to reinforce and invigorate the older downtown area. The old and the new are, in fact, complementary. Elegant and efficient though Metro Centre and Harbour Square may be, their tall new buildings and bright plazas will not have the adaptability, the comfortable capacity to provide for the diversity of downtown needs, that can be offered by the "old-fashioned" core area, the untidy, often drab and inconvenient, product of a cen-

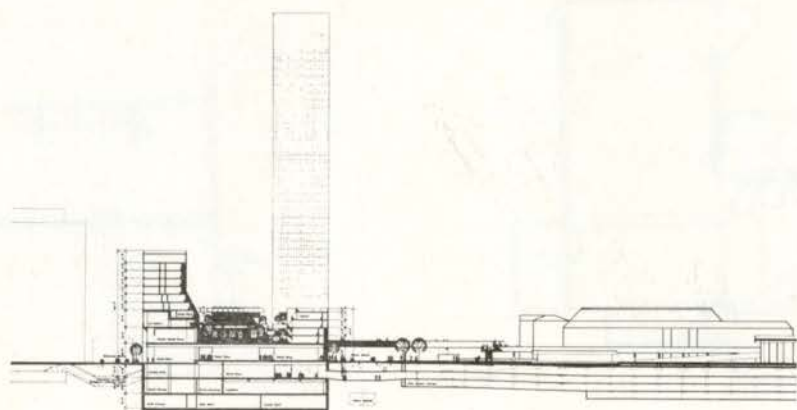
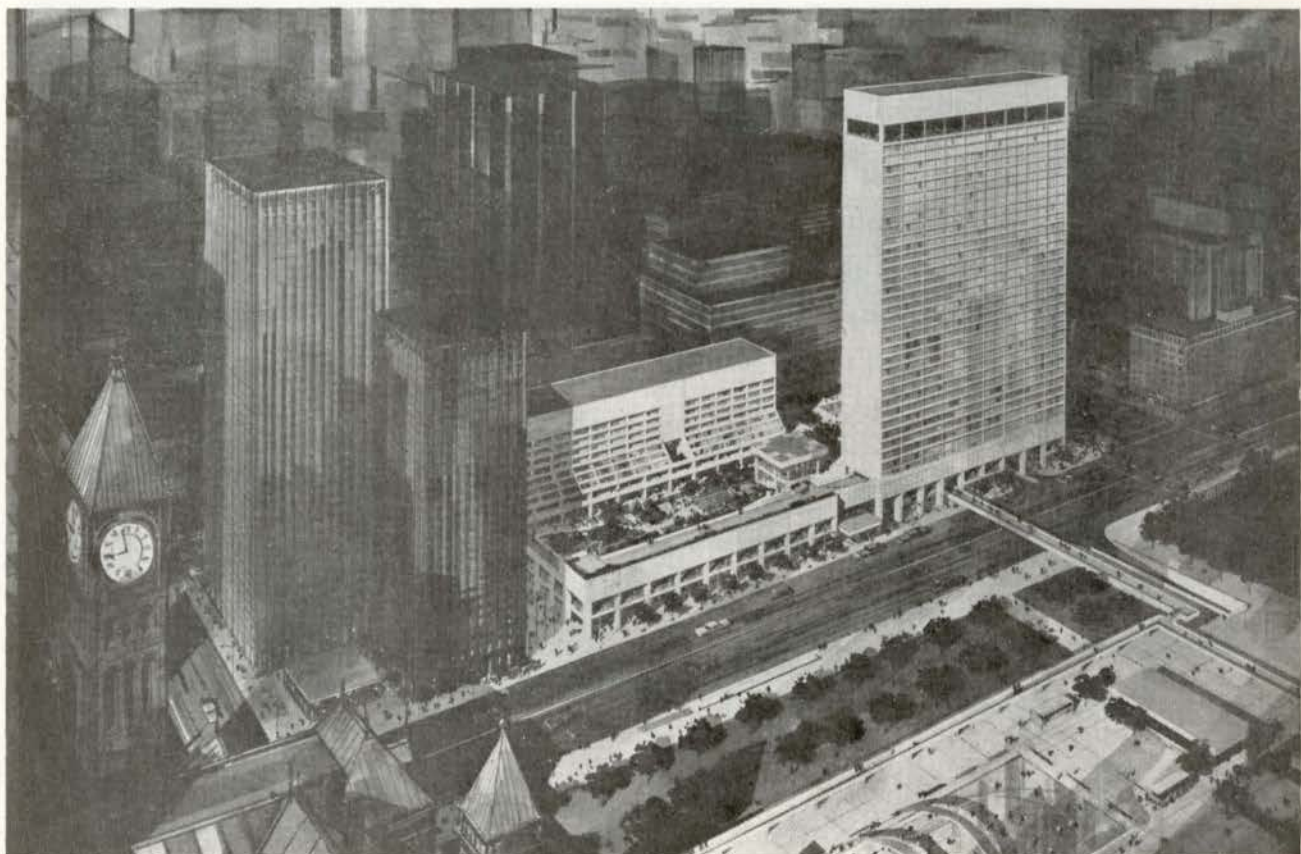
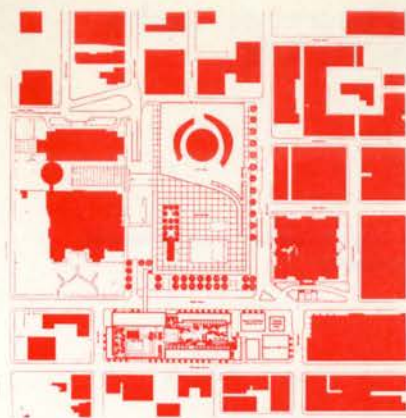
ture's piecemeal growth. The barbers and the bookbinders (even the bookies?), the greasy spoons and the go-go taverns will still be found, for the most part, north of Front Street. Similarly, the apartments that will spread around the south end of Spadina Avenue in a setting of parks and waterways may be enticing to the wealthy and would-be wealthy, but renovating the old houses to the north, and improving their environment, is much more likely to be a feasible way of meeting the housing needs of the poor and near-poor.

Whatever the merits of the new schemes may be as self-contained architectural and planning accomplishments, their true achievement would therefore lie, not in replacing the old, but in complementing it; in creating a balance of old and new in which the one supplies what the other cannot, to realize to the fullest possible extent the essential purpose and meaning of the city. This is the peculiar virtue of these new projects and the unprecedented opportunity which they present, an opportunity denied to the creators of instant cities like Brasilia. The moral is that the care and skill devoted to renewing and improving the older quarters of central Toronto is as important, if less spectacular, than that which goes into the designing of the new; it must not be inferior. □

Four Seasons Sheraton Hotel for Civic Square South

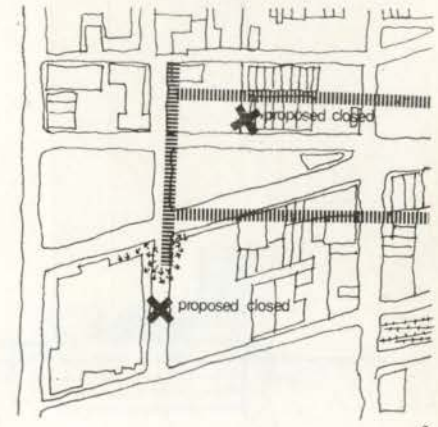
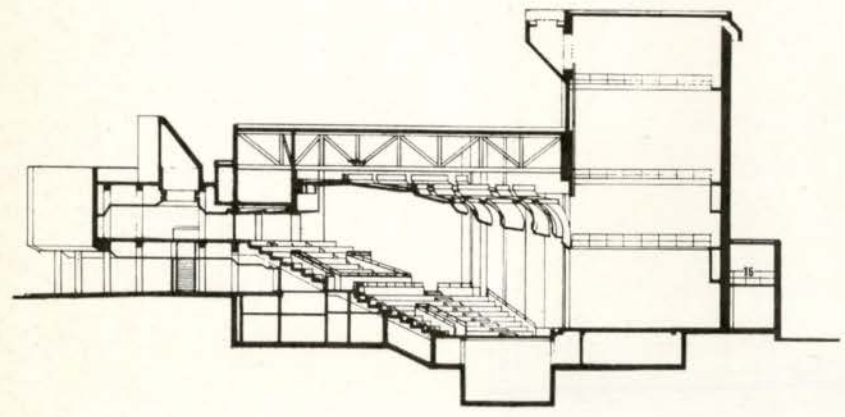
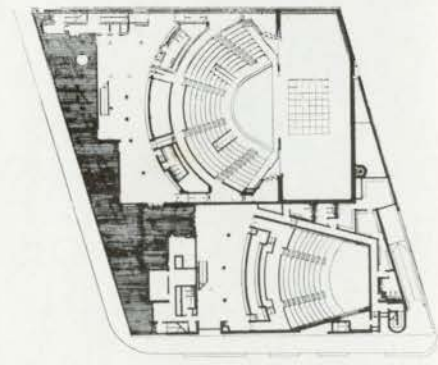
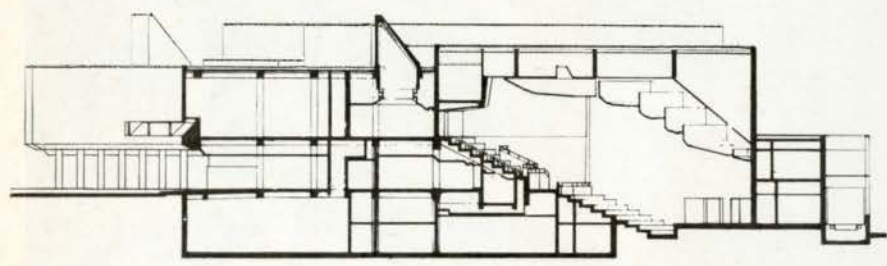
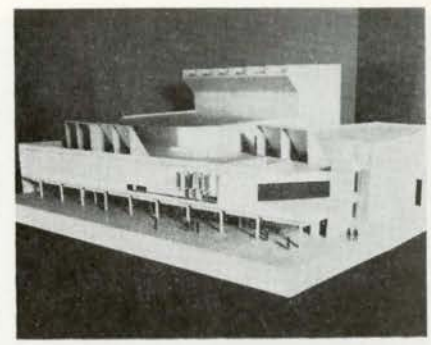
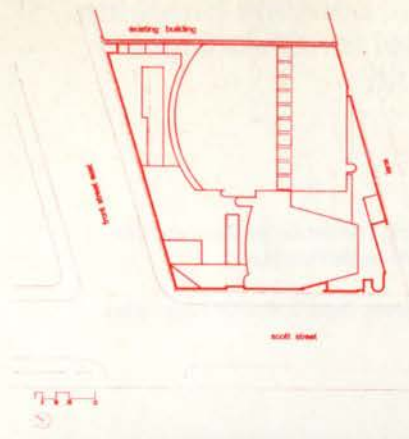
Owners, The Inn on the Park and The
Four Seasons Hotel Ltd.

Architects, John B. Parkin Associates



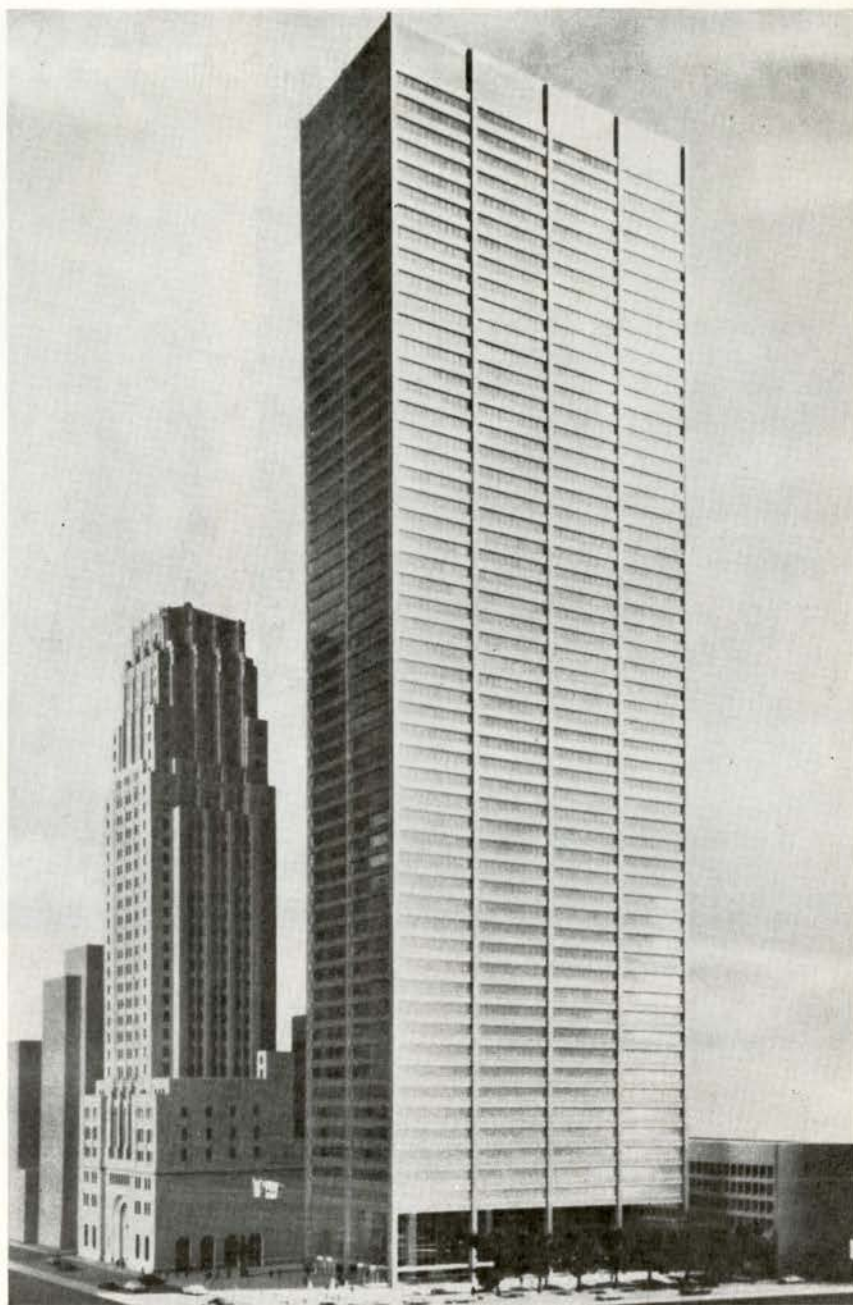
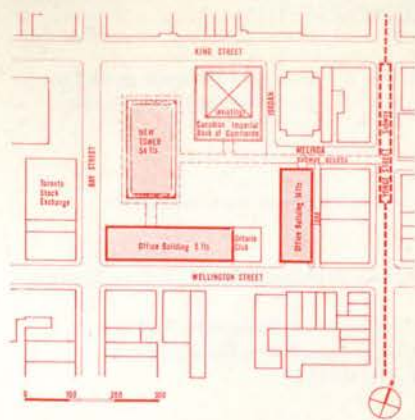
St Lawrence Centre for the Arts

Architects, Gordon S. Adamson and Associates



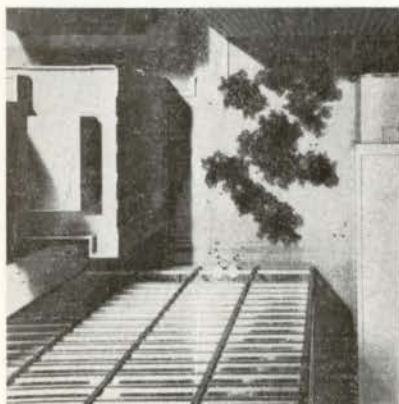
Commerce Court

Architects, Page and Steele



Existing head office building of Canadian Imperial Bank of Commerce at left, on the right, the new 54-storey tower

Siège social de la Canadian Imperial Bank of Commerce à gauche, et, sur la droite, la nouvelle tour de 54 étages.



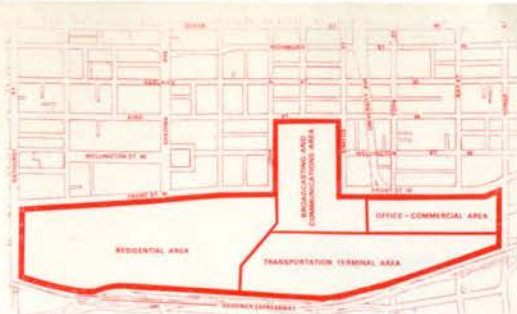
Metro Centre

Study for Development of Lands owned by
Canadian National and Canadian Pacific

Urban Designer and Architect, John
Andrews

Associate Architects, Webb, Zerafa, Menkes

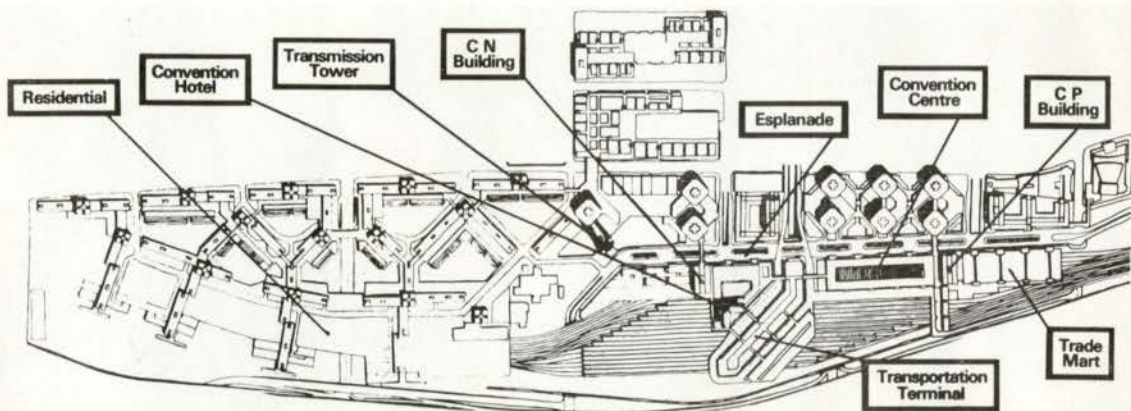
Project Director, Stewart M. Andrews,
President Community Development
Consultants Ltd



Site, 190 acres between downtown area and
Gardiner Expressway along waterfront

Terrain de 190 acres entre de centre ville et
l'autoroute "Gardiner Expressway" le long
des quais.





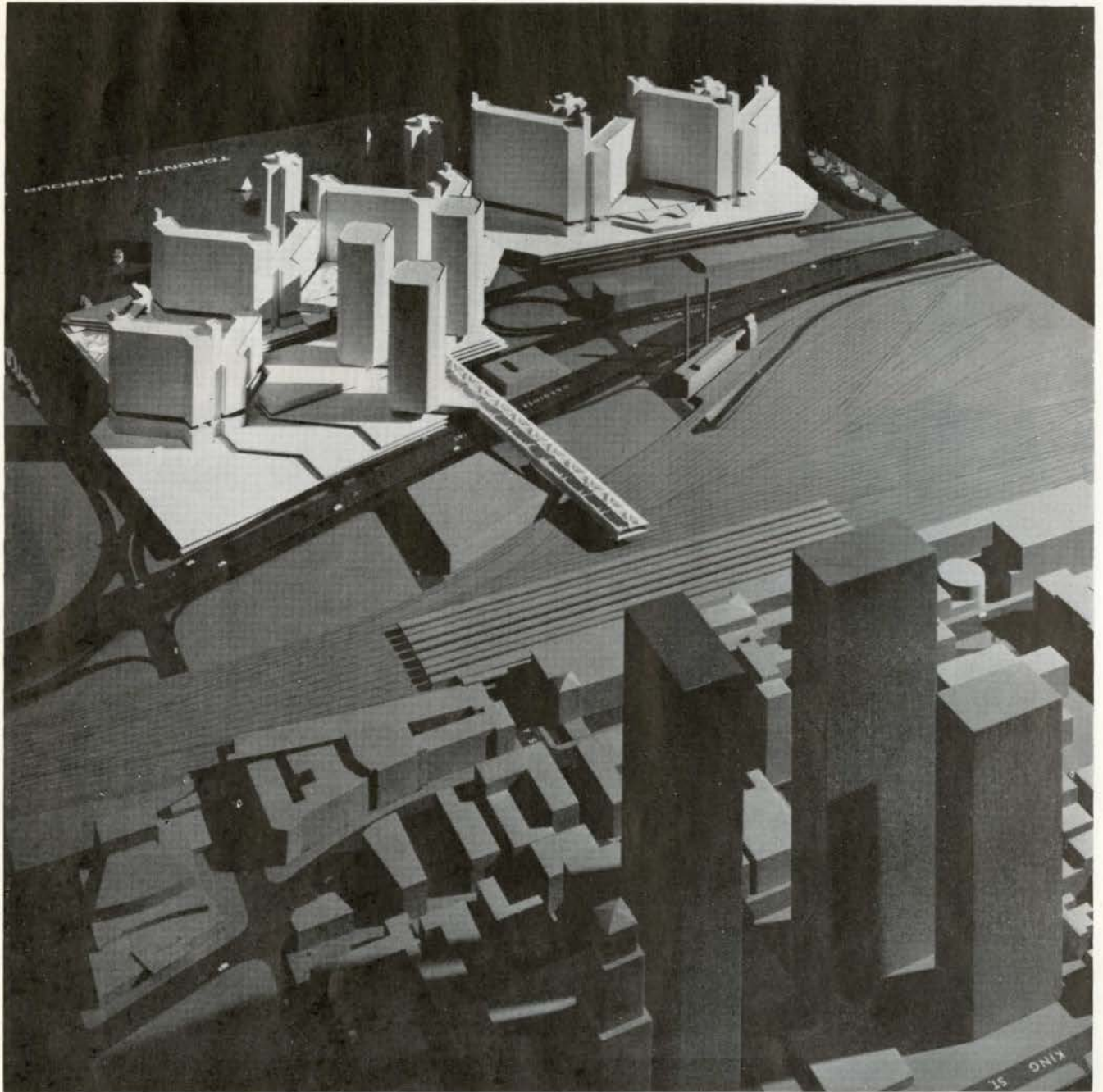
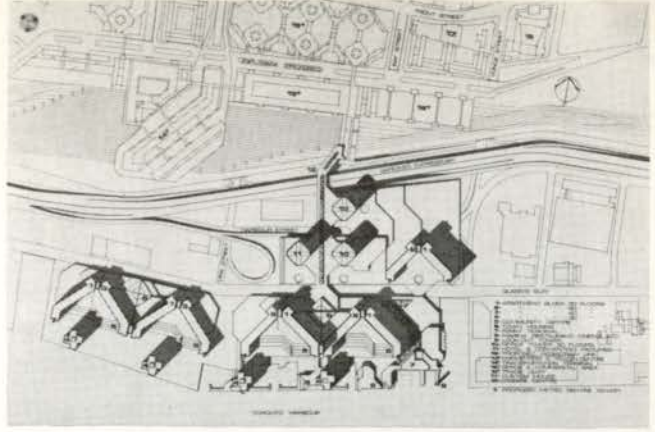
*Aerial view of city from Lake Ontario,
Metro centre model in foreground*

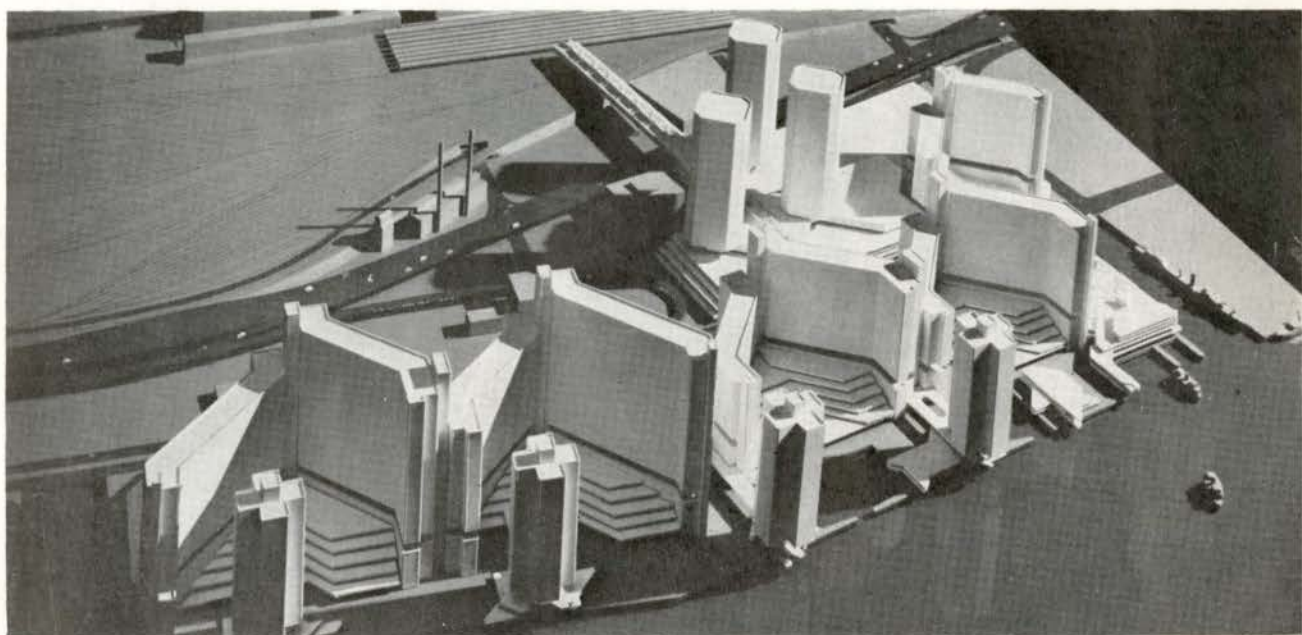
*Vue aérienne de la ville prise du
Lac Ontario avec la maquette du centre
métropolitain en avant-plan.*

Harbour Square

Architects, Bregman & Hamman

Developed by Campeau Corporation Ltd.





A Conceptual Plan for the Development of the City of Toronto Waterfront

J. H. Jones, P. Eng., Chief Engineer,
Toronto Harbour Commissioners



*Present Shore Line
Rivage existant*



*Proposed Shore Line
Rivage proposé*



Harbour City



Harbour City

Notarial Documentary Sources on French Colonial Buildings in North America

A. J. H. Richardson

Mr Richardson is Head of the Architectural Inventory Program, National Historic Sites Service

"If you seek his monument, look around you". The best-known architectural epitaph really seems to typify the architect's preference for *three-dimensional* expression. No written epitaphs; and often, apparently, he lets his preliminary paperwork on a commission disappear like so much expendable scaffolding. This attitude is at least common enough, so much so that the profession's journalists, the officers of *Architecture Canada* have proposed a National Architectural Archives for Canada specifically to stop this wastage.

It isn't in architects' files, then, that we look for the fullest record of their work, but to other disciplines, more concerned with *verbal* expressions – specifically with the definition of the great network of legal relationships that springs from the *business* of building. The search is most fruitful in those parts of the world, and in those eras, where this definition was most completely organized through the civil law tradition, with its emphasis on a notarial system of full and permanent record of business transactions. Thus it is that in Canada, the most detailed architectural documentation (the fullest description in deeds, the largest number of surviving building contracts, through which specifications are preserved) is in the areas where French law prevailed. In fact, the line from Quebec (or rather, Cape Breton) to New Orleans is richly endowed from the days of French and Spanish regimes with a great body of notaries' files. And this is a continuous heritage, from the start of its history. In old France, in fact, the name for "a contract", a *marché*, seems to hark back to the original haggle of the market-place; à *bon marché* is still the French phrase for "a bargain". At any rate, when France began her permanent American settlements she was already able to bring here highly mature systems both of craft training and organization and of business record. Each was a 300-year old structure largely built on foundations placed by that unlikeable but clear headed fellow Philip the Handsome – the king who harried the Pope and the knights Templar. In the

century and a quarter before the founding of Quebec in 1608, the notaries of Paris alone had produced documents at such a rate that 17-million of them survive from those years. So, in the ports of France in the early 17th-century, elaborate, legally expressed associations, charter-parties, freight contracts, recorded the first big overseas trading venture. Formal notarial engagements bound the first settlers of New France and recorded their very move across the Atlantic – including a mason and a tile-roofer to "make the voyage of Canada", and to ply their trades there for a year (probably at Port Royal, Nova Scotia) three years before the founding of Quebec. Champlain's narrative of these two settlements indicates a sophisticated craft tradition existed too. He makes a clear distinction between his *charpentiers* (who put up the *charpente*, the timber frame of a house) and his *scieurs d'aix*, who sawed boards.

Reproducing the complete craft and business organization in the colony itself was another thing again, but by the 1620's the first notary was practising in Quebec. A contemporary building, the half-timber house of the first man to make his living from the soil in Canada, Louis Hébert, was (after Hébert's death, but as early as 1639) the subject of a notarized careful condition report by two builders. One of them places his "accustomed mark", possibly a tilting saw-pit trestle, to the document, and next year another carpenter draws *his* mark of a set-square on the second known Canadian building contract. By 1646 the masons of Quebec carried their symbols, a hammer, compass and ruler, in a craft procession.

The 1640 contract contains partially dimensioned specifications and these documents quickly grew still more elaborate. The roof structure of the first church of 14-year old Three Rivers was detailed in proper technical terms in the 1648 agreement to build, and so was that of an early 18th-century mansard-roofed public building in the same town. We learn various features of size and structure of the timber-

filled wall-frame and of floor construction from Montreal contracts of 1663 and 1660. The various woods used in the stair parts and the cellar joists appear in a long contract of 1687 for a big house in Quebec. Montreal's oldest building contract, 1648 was only five years younger than the town.

These contracts were, of course longer than the earliest ones, and ran to over a thousand words by the 1680's. By this time the specifications, or *devis*, was often a separate, attached document, as for the big mansard-roofed house of the explorer Jolliet at the foot of the rock of Quebec. The elaborate reredos for the altar of Ste Anne in the Quebec Cathedral, 1660, was to be done according to a drawing, now vanished, as have most of the attached plans – though a general one for a building of 1672 at Lachine near Montreal still survives, and there are several nearly as old showing roof-framing. In fact, in 1655 the carpenter François Boivin had even contracted to build the second church of the Ursulines at Quebec with the aid of a structural model prepared by Charles Boivin. M. Couillard de l'Espinay, getting a fine house in the Lower Town of the same city, 1683, specifically ordered a cut-stone fireplace just "like M. Landron's". The larger private residences had for some time now been built by groups of contracts with different craftsmen (like the early country villa, the Maison Blanche of the great fur-trader Aubert de la Chesmays just outside Quebec, in 1679) and in fact, for public buildings even earlier, as witness the twelve contracts which provided for the supply of materials, masonry, carpentry, joinery and hardware of the Governor's Château St Louis as early as 1647 and 1648.

By the end of the 17th-century, in an almost vegetable proliferation of forms, many particular additional *types* of document were provided for all the adventures that could befall a contract. There was the *dépôt* (deposit); *ratification*, *reconnaissance* (taking a partner); *cession*, *délaissement* and *transport* (transfer); *désistement*, *cancellation* *résiliation* (also cancelling), *annulation* and *cassation* (breaking) of; the

1

Seventeenth century door bolt in the attic of Ste Famille of the Ursuline Convent, Quebec, - typical form of the period
Verrou du 17e siècle dans les combles de l'Aile Ste-Famille du couvent des Ursulines, Québec - forme typique de cette période

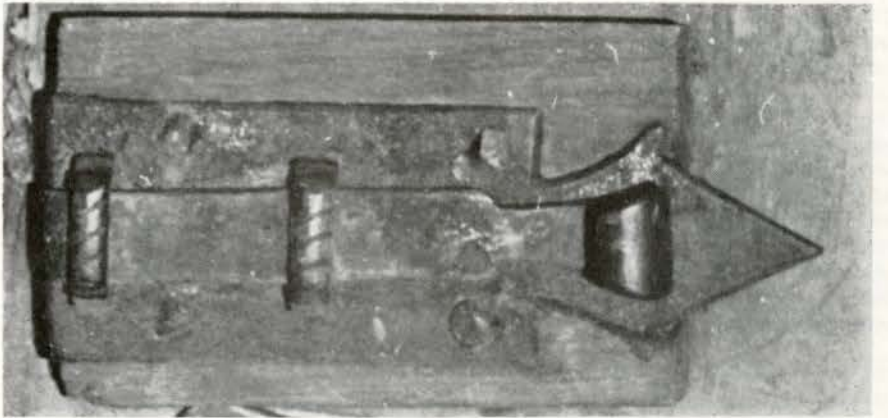
soumissionnaire du marché mentionné plus haut. La maison existe toujours. Pentes de toit et lucarnes "capucines" typiques du 17e siècle

2

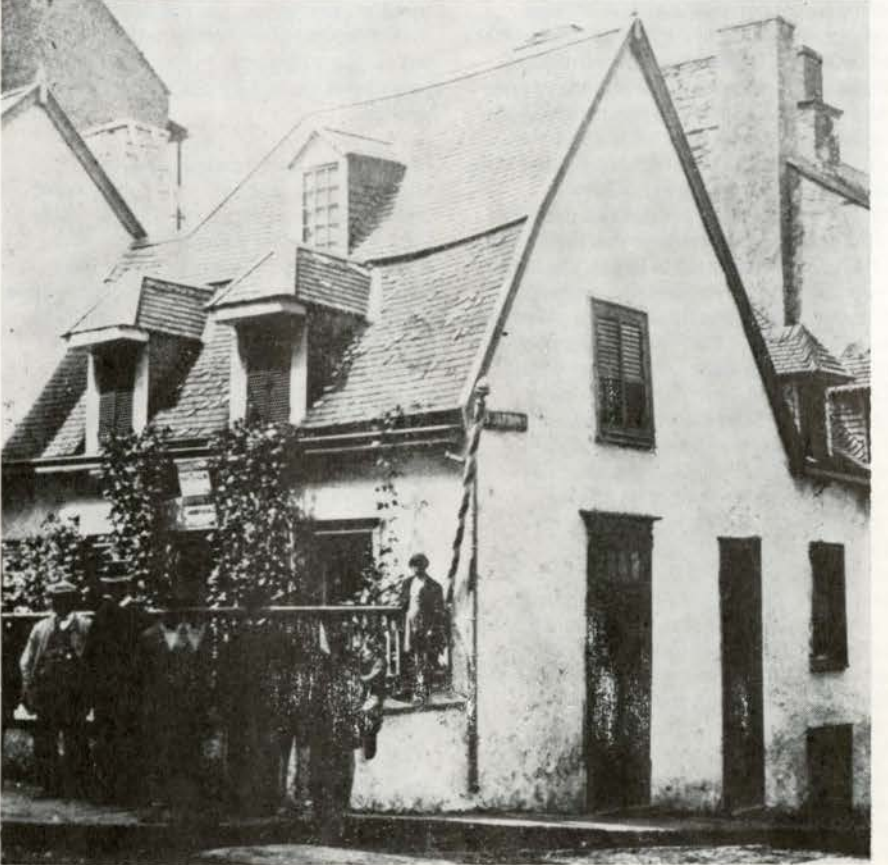
Photograph c. 1870 of 34 St Louis Street, Quebec, the house of Pierre Ménage who entered into the above contract in the 1680; it still survives. Typical seventeenth century roof-pitch and "capucine" dormers
Photo datant de 1870 de 34 rue St-Louis, Québec, la maison de Pierre Ménage,

quittance and *décharge* from and the continuation of, *marchés*. There were sales and leases of property, or partnership agreements, with engagements to build or repair buried in them. While all these documents have less architectural and more legal content than the original contracts, they are usually worth checking for scraps of extra information, particularly if the contract itself has disappeared. Building accounts were fairly often deposited in notary's files, especially in the case of a disagreement.

Building was sometimes provided for by the *convention*, rather more binding than a contract, and usually adopted when there was some legal difficulty involved. The *accord* was a document, sometimes about a building matter, that usually followed on harsh words, common in Latin communities; one of 1687 has a good roof-framing plan attached. The *contrat* was not (unless, as occasionally, the term was misused) a building contract at all but could be a contract of sale, and, more usually, a marriage contract. There were many other types of notarial document, and a few more of them are useful to the architectural historian. Deeds in French North America usually have a description of the buildings on the lot, giving at least material of construction and number of storeys, and sometimes a lot more, such as dimensions, method of construction, special features, etc. Inventories of deceased person's property (a common procedure, especially since in these countries there was usually community of property between husband and wife) sometimes give more than the deeds. Particularly full, accurate and valuable, of course, are the special reports on construction made for various purposes, usually by professionals and deposited with, or redrafted by, a notary. Such are the *expertise* (usually a valuation or a condition survey), the *toisé* (quantity survey) and the *procès verbal* (actually a written report, of a survey in the widest sense of the word). The two latter have been noted for masonry, for the timber-framing of a building, for the fittings, or for a building generally.



1



2

Quebec Court House Archives, Greffe of François Genaple, Notary – part of a contract between the Ursulines and Pierre Ménage and Jean Caillé, carpenters for “ouvrages de charpenterie”, including a “comble” (roof-frame) for the new building, now the Aile Ste-Famille, to be completed during the summer of 1688.

Archives du Palais de Justice, Greffe de François Genaple, notaire. Partie d'un marché passé entre les Ursulines, Pierre Ménage et Jean Caillé, charpentiers concernant les “ouvrages de charpenterie” y compris un “comble” pour le nouveau bâtiment, maintenant l'Aile Ste-Famille qui devront se terminer durant l'été 1688.

Marche de
 Charpentiers pour
 les D^{es} Religieuses
 Ursulines

5^e Janvier 1688

fuvent present Pierre Ménage et Jean Caillé
 Charpentiers de cette ville, les quels ont été convenus et
 sont obligés solidairement l'un pour l'autre, avec
 J. . . Dames Religieuses de l'Ordre de l'Ange de la dite Ville
 a représenter et assister tant pour elles que
 les autres Religieuses de leur Monastere les Dames
 Reuevendes & Meses Marie de Jesus Supérieure
 Marie de St Joseph assistant, Marie de St Athanase Religieuse

Roof-frame of the Aile Ste Famille, 1688-87. Typical seventeenth century roof-pitch and “St-Andrew’s Cross” longitudinal tracing Charpente de l’Aile Ste-Famille exécutée en 1686-87. Tracé longitudinal typiquement 17e siècle des combles avec “Croix St-André”



5
 Part of "Plan de la Ville de Québec" en la "Nouvelle France" by the military engineer Robert de Villeneuve, 1692, showing the Ursuline convent, (with Aile Ste Famille upper right wing of the "L") and the Menage house now 34 St-Louis. (circled)
 Partie du "Plan de la Ville de Québec" en la "Nouvelle France", établi par l'officier du génie Robert de Villeneuve en 1692, montrant le couvent des Ursulines (avec l'Aile Ste-Famille, plan supérieur à droite du "L") et la maison Ménage, maintenant 34 rue St. Louis (entourée d'un cercle)

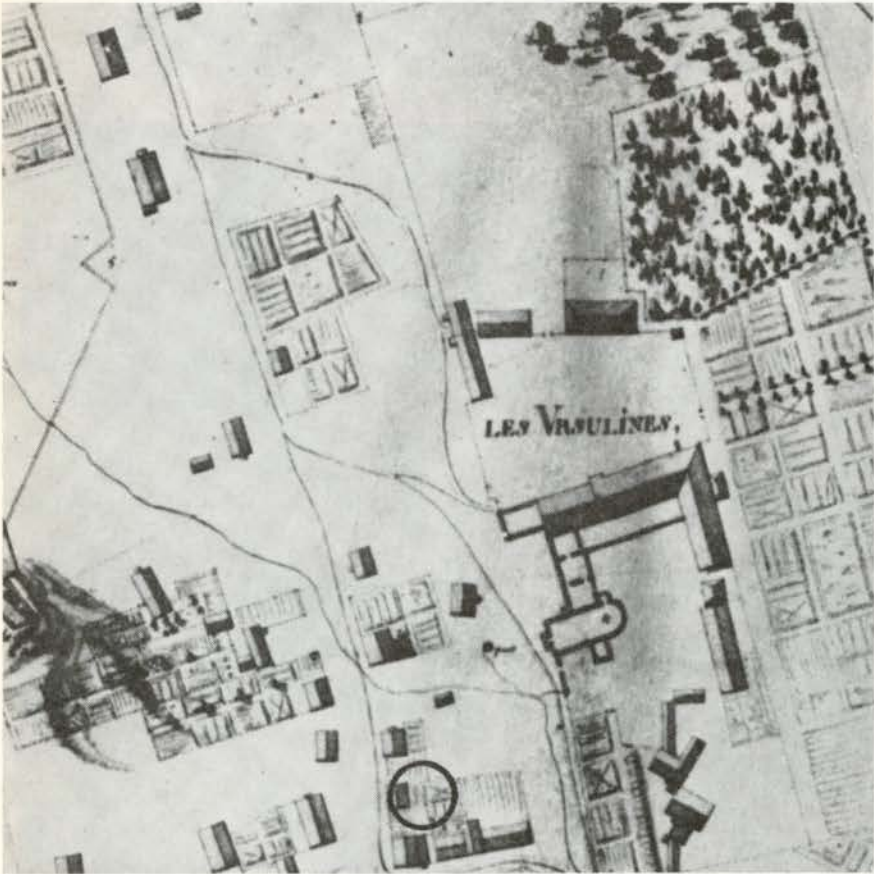
The notarial business of the colony of Canada was only a minutest fraction of that of highly-civilized 18th-century Paris. However, 48 notaries practised in Quebec City during the French Régime and left perhaps 75,000 documents in their files, nearly all of what they produced. Montreal, with a few more notaries (51), has only about 60,000 of their records. Three Rivers, the third largest town, would have produced a sizeable amount. There were a number of country notaries also, so there is perhaps a total of between 150 and 200 thousand in all, a very valuable body of record for 17th and 18th-century North America, particularly as most of it is detailed and

precise. At Montreal and Quebec about one document in every thirty is a contract, and about one in a hundred with the country notaries, though a higher percentage were passed in the well-organized settlement at Boucherville, near Montreal. Thus we have about 5000 to 6000 French Régime contracts for the colony, probably well over half relating to building, and another two or three thousand other notarial documents of architectural value. When we consider that in 1759 Quebec, the largest town, had only about 600 houses and Montreal only 1000 in 1789, we can see how much of the colony's construction is documented by this kind of record,

though many contracts do not cover all the work on a building. Certainly, a large proportion of the famous names of the colony are found in the contract files and many of its famous buildings (the lengthy specification for Jolliet's 1683 house seems to be in his own hand); and although more building contracts seem to have been preserved from the period 1680-1720 (when the handwriting was much more antique) than from 1720-1760, and the latter was a great era of rebuilding, we still have them for a good proportion of the surviving important buildings – such as the big stone 1752, "Fargues" or "Estèbe" house in Quebec's Lower Town and the great 1687 steep, massive "St Andrew's Cross" roof-frame of the Ste Famille Wing of the Ursuline Convent in that city.

With less notarial record of contracts during the eighteenth century, the colony still took one important step to help our architectural sources. Following (a long time after) a royal decree in the early 1730's the files of the different legal jurisdictions were enriched by a program of copying from the files of the notaries who had been irregular in depositing copies in the public record. It was even proposed to build fireproof vaults to hold the public copies.

It is at this period too that the notarial architectural record begins to spread out geographically, along the great interior line of French communication and to the new seacoast settlements at each end that secured the colony's link with the mother country – New Orleans and Louisbourg, N.S. Busy, sophisticated New Orleans, with its prosperous trade with the rich sugar isles as well as with France, and its quick spread over its formal gridiron of streets, produced a quantity of building contracts, and of course its French and similar Spanish government lasted longer than at Quebec. I have seen a great number of these, including many drawn up in Spanish by French notaries, and I found that the contracts, specifications and *toisés* tend to be even fuller and better drawn up in New Orleans than at Quebec. I have no overall comparative total of New Orleans notarial documents or the architectural ones,



5

but I took notes from the records held at the Court House and the Cabildo on 27 contracts of the 1730's and 1740's, 15 of the 1780's and 35 of the 1790's and 1790's, some of the latter by English builders. These included better plans than any at Quebec (though of both places there are many military plans finer still) and some contracts fuller for structure and style features than any Quebec ones.

Louisbourg is a contrast. Though also a very busy port, it was described by a New England soldier as a "mean built town", apart from its great public buildings, and its life was only a generation, 1713-1758. Among the approximately 5000 notarial papers sent back to France after its fall, there are very few (perhaps not more than a dozen) building contracts, and these mostly rather short, general and informal. The official records of this fortress of old France (now being restored by the National Historic Sites Service), are of course a different thing again, equal in quality to New Orleans.

But near the centre of the arc of settlement, far back in the fur country, another French notarial organization was producing a surprisingly extensive and detailed, though often informally recorded, body of architectural data. Though some of the earliest sales (1708) of Detroit lots include undertakings to complete buildings (in 4 days!) that contain good thumbnail descriptions, we have no notaries' files from 1711 to 1737, few before 1766, and there is hardly a contract or other architectural document among the 1500 late eighteenth century acts surviving, though the detail and form of what we have is good. By contrast, little Kaskaskia in its bend of the Mississippi had at least 14 notaries between 1719 and 1800 (besides the Jesuit curé who filled in when no notary was around). One of these men alone (Barrois) drew up 2300 documents during 20 mid-century years; 60 of these were *marchés* or *devis*, at least definitely relating to buildings. Notary Jerome during the same period also passed 60 *marchés*, out of only about 1050 acts — a much higher percentage than in the country villages of Canada. Other Kaskaskia notaries prepared another 700 documents, and this is far from the full total. Among the 3500 Kaskaskia

documents carefully preserved at Chester (some duplicates), not many are building contracts, though there are at least eight as early as the 1720's and 1730's, some in good form and detailed, and many inventories with architectural data. From contemporary Cahokia probably little notarial paper and almost none of architectural value, has survived. From the second half of the century, the Ste Geneviève notarial records, about 2000 papers, have 14 agreements or contracts from the 1760's and 1770's and these are mostly full of detail. I have not seen the extensive St Louis material, but a number of the other St Louis notarial papers quoted by Billon are detailed and well drawn up. In this town one of the first notaries lived in a 66-foot stone house, perhaps indicating lots of business.

So we have a great cross-section of French building in North America, but it is only a part, as can be guessed from the figures, of a much vaster detailed record of French social life. Even the contracts, as I indicated, deal with many other subjects beyond architecture. In the Quebec and Montreal Court Houses, there are *marchés* for watchmen of government buildings, for the sale of eels, for the manufacture of 100 bateaux, or of 1600 paddles, or of 1200 pairs of clogs; a *marché* for the domestic service of a little boy 2 years of age; a *marché* "to show (adults) how to read and write", and many others for commoner activities. I hope that architectural historians could use the architectural material to tie in with the general social picture. There is a great mass of biographical material, as much as possible of which my office, the Canadian Historic Sites Service, is incorporating in a large card-index of Canadian architects and people in the building trades. There is much on the development of the building craft relationships, from the first arrival from France, and by contact back with the old country, to partnerships, intermarriages, apprenticeships, so that we can not only see very early partnerships (even of nailmakers in 1700) but can also see long craft dynasties, straddling between Quebec and Montreal and moving thence east to Newfoundland, or west to the Mississippi (and one of them to Persia) and also the development of the "architect" from

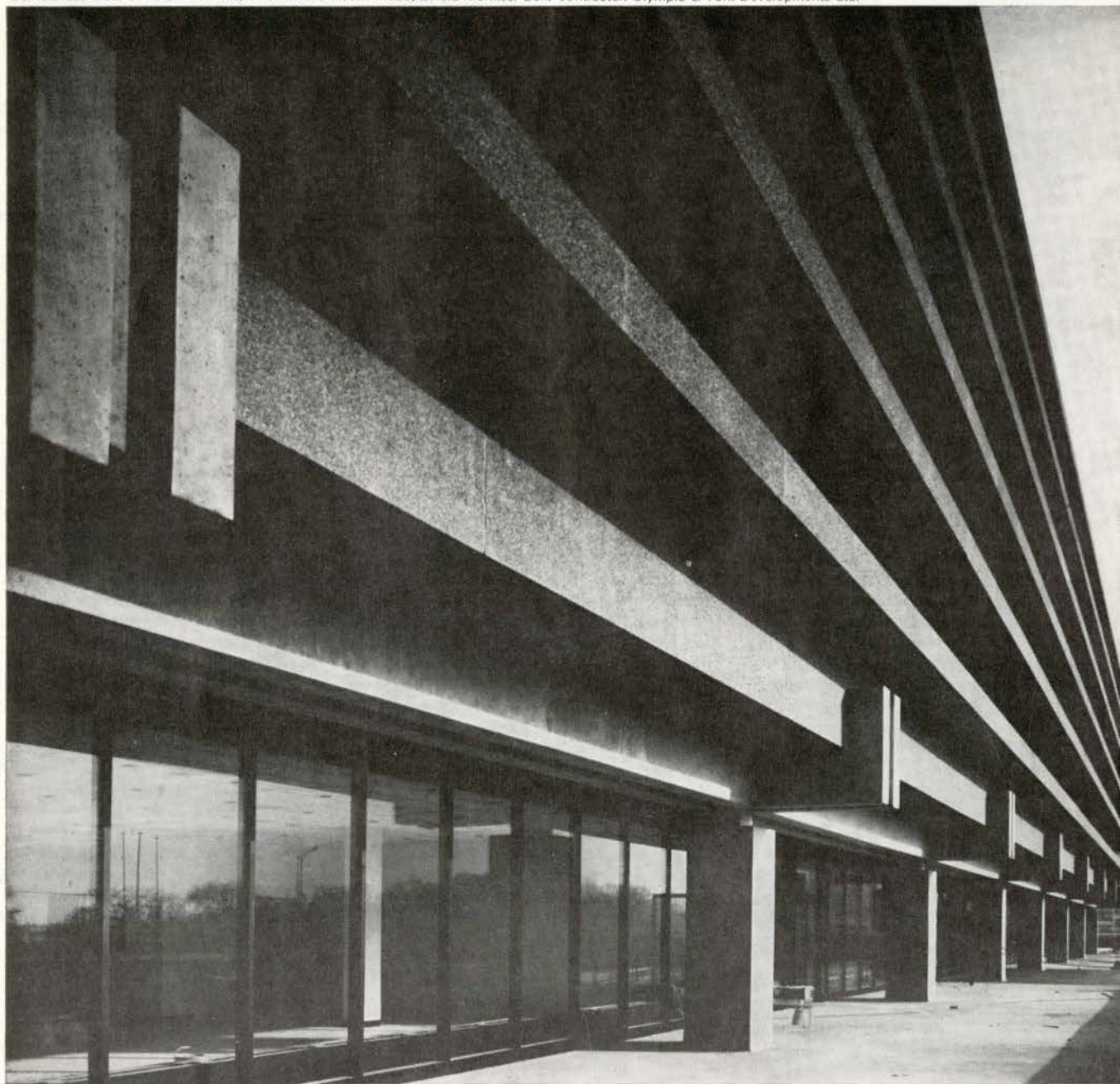
the "mason." There were at least six "architectes" in Quebec City in the 1690's, and earlier (1683) one of them, Claude Baillif, had been entered as "architecte et maistre maçon" in a notarial paper, and then, recollecting his dignity, had had the "maistre maçon" scratched out. A good part of the story centres around a block or two on St Louis, Quebec, where for several generations a group of architects, masons, joiners, sculptors, carpenters, roofers, lived side by side, their families intermarrying. Some of these were among the men who, led by a Rue St Louis resident, Jean Levasseur (still proudly signing himself "maître menuisier de Paris"), secured detailed instructions in 1659 from the *Confrère de Ste Anne*, the woodworkers' guild of Paris, on how to set up a Quebec chapter. In this group in the mid-eighteenth century was a master mason Jacques De Guise *dit* Flamant, kin no doubt to Amable Flamant, the late 18th century St Louis mason. Also Jean Roy *dit* Lapensée, the Montreal carpenter of 1681, would be related to Illinois Country Roys *dit* LaPensée.

The story can come so much to life from these documents that we almost feel these are people of our day. Then we turn a page, and a very different past comes home to us. The first notary of Montreal was Jean de St Père; two of the first acts passed in 1659 by the third one, Bénigne Basset, were an inventory of the movable property and a *procès verbal* of the real estate, of Jean de St Père, killed and scalped by the Iroquois two years before, while helping his father-in-law, the master carpenter Nicolas Godé, put up a house on the outskirts of the settlement. It is said that the Indians were proud to get this scalp because St Père had such beautiful long, curly hair. Only three years later Basset also drew up a similar pair of documents for the estate of the *second* notary, the brave defender of Montreal, Lambert Closse, who had likewise died at the hands of the Iroquois; as did also the first notary of Three Rivers. Even back in Quebec City the merchant Aubert de la Chesnaye got permission to store *gunpowder* in his nice little "Maison Blanche" villa in St Roch just outside the town, whose vault survives till this day.

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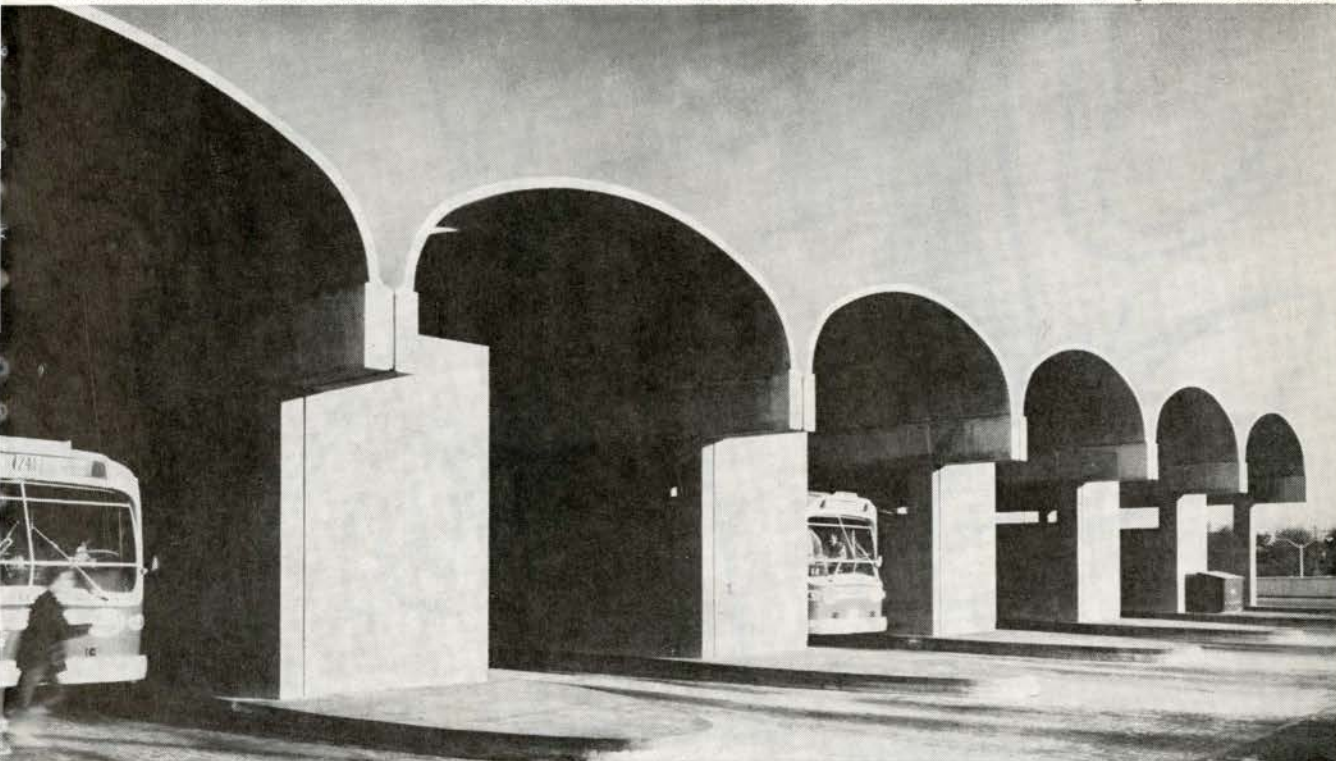
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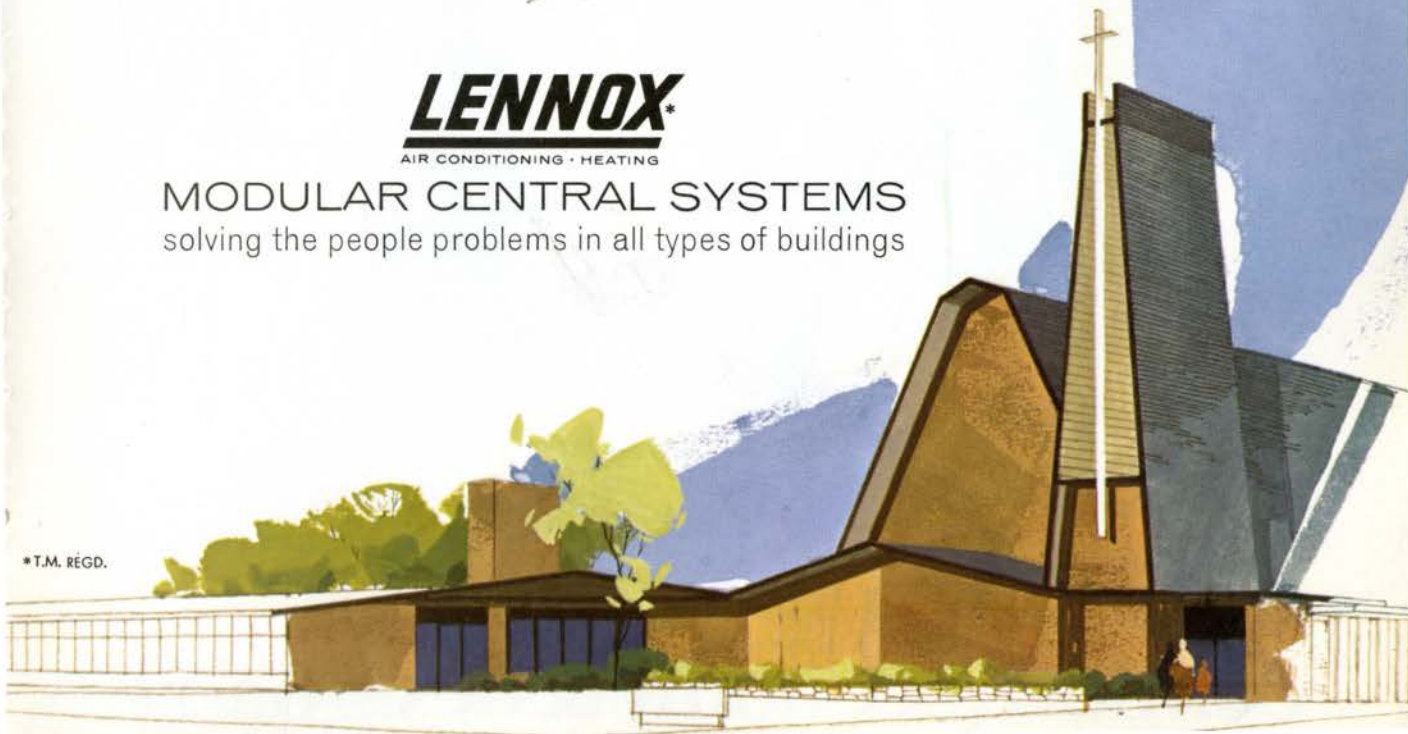


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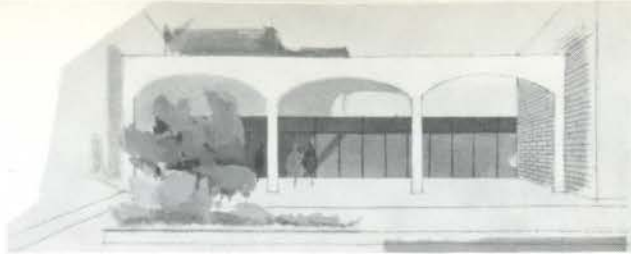
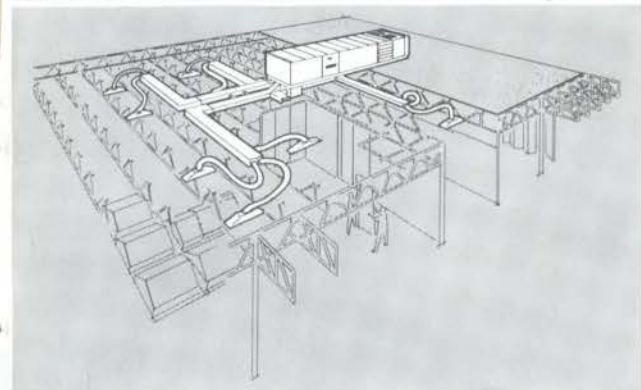
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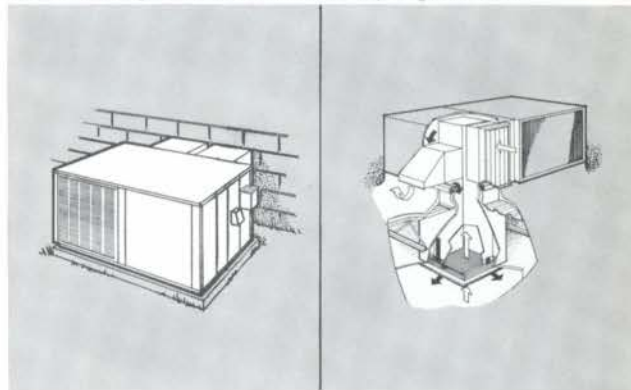
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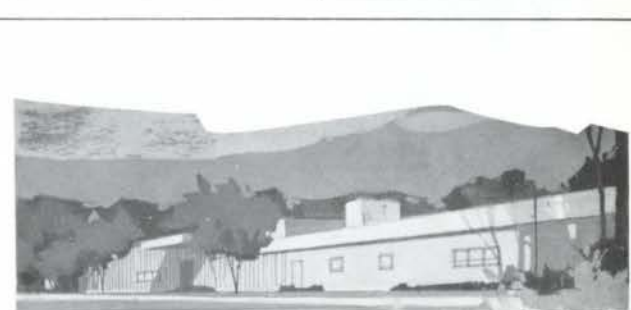
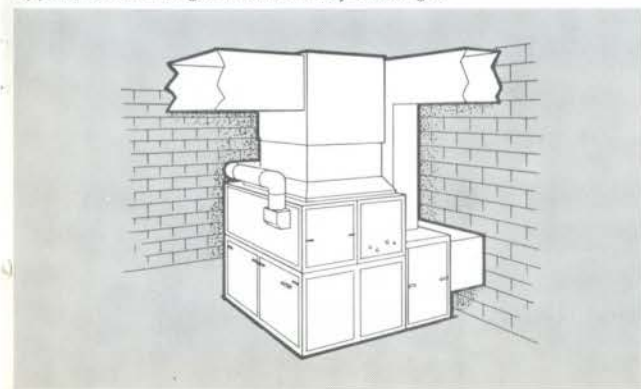
Patrons and employees of the 80 stores and theatre in this colorful, exciting shopping center will find the comfort right! Some 800 tons of cooling will come from a variety of Lennox equipment atop the center's 18-plus acres of buildings. Among the Lennox equipment supplying this large volume are: GCS single-zone combination gas heating/electric cooling units for large, undivided spaces; DMS units for the many individually-controlled comfort zones; condensing units coupled with coil/fan units; and other modular central systems.

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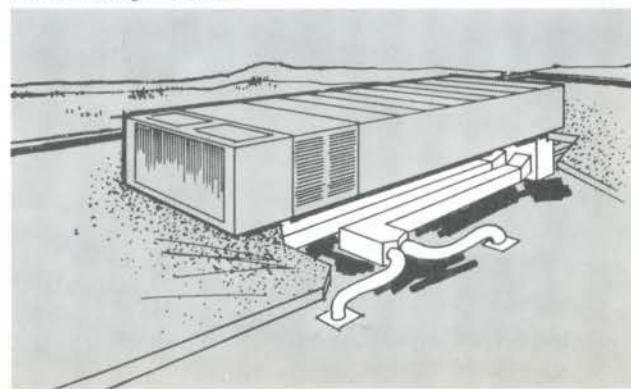
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lever 1 3/4"x6" by any thickness			
lever 1 3/4"x6" by any thickness			
knob 1 3/4" to 3" various projections (2000 Variations)			
knob 1 3/4" to 3" various projections			
knob 1 3/4" to 3" various projections			
knob 1 3/4" to 3" spheres			
locks and latches	complete selection of locks and latch functions. hardware prepared to mate with any lock or latch.		
pulls			
plates	all plates 3/16" thick no visible screws		widths 3/4" to 12" and over. drilled and prepared to fit any lock, latch,
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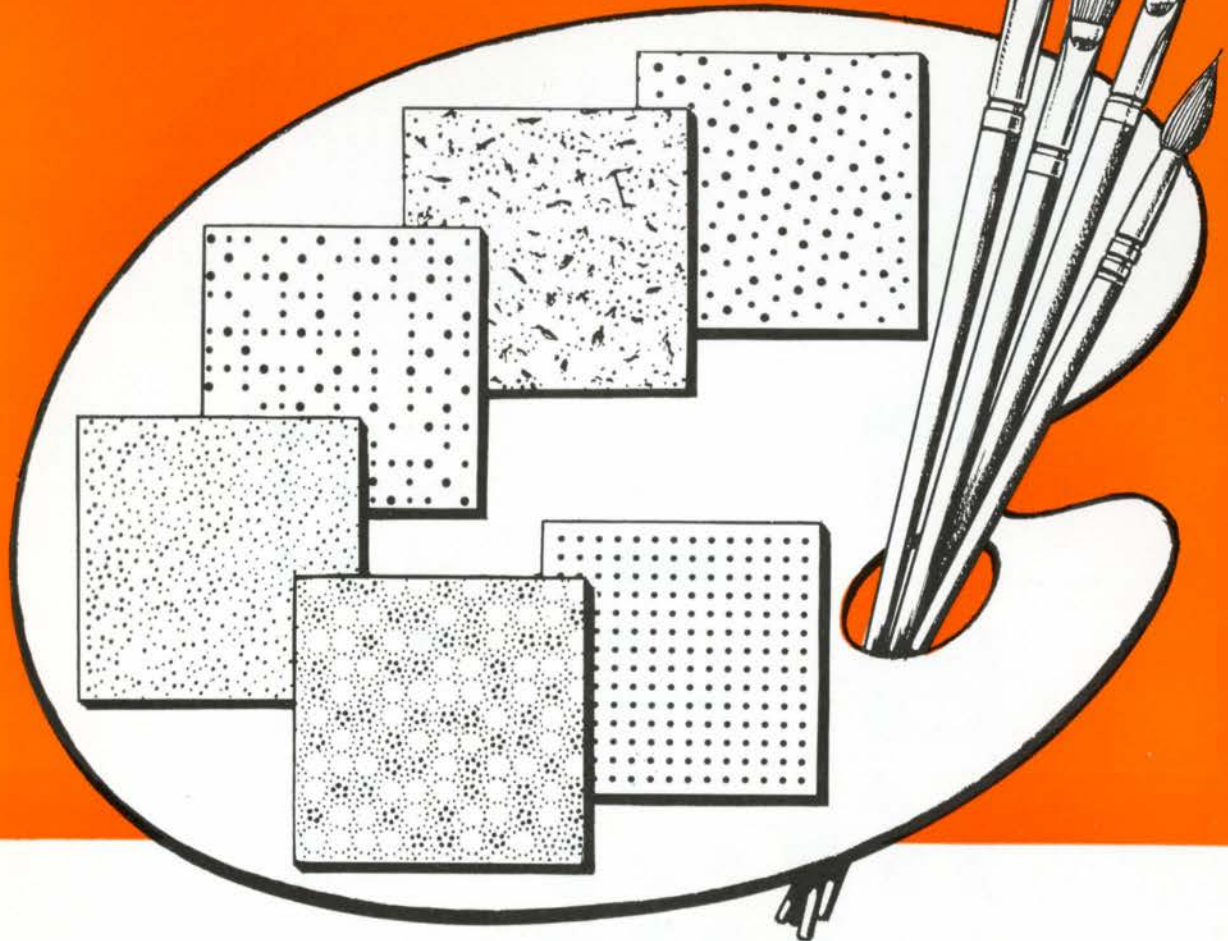
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Raymond T. Affleck, MRAIC

The design of an exterior wall as an impenetrable barrier is questionable as in many cases it is the interior climate escaping through the walls which creates the greatest problems.

This article by Mr Affleck, a paper given to the International Council for Building Research in Oslo, Norway in April 1967, describes the wall design of four outstanding buildings in Eastern Canada by the firm of Affleck, Dimakopoulos & Lebensold: Place des Arts, Place Bonaventure and the Stephen Leacock Building at McGill University all in Montreal and the Arts and Cultural Centre at St John's, Newfoundland.

These buildings were designed on the "rain screen" principle and are analysed in terms of exterior wall construction and design of joints.
A.W.C.

The Environmental Barrier

The geographic location of the examples to be studied in this paper involves a rather rigorous northern climate. Temperatures range from -20° Fahrenheit to $+80^{\circ}$ Fahrenheit in summer. Very rapid temperature changes often take place and on occasion near-horizontal driving rains occur (the latter particularly in the Maritime province of Newfoundland).

Contemporary standards of comfort within buildings have led to a situation where the climate inside a building is often just as critical a factor in wall design as the climate outside. These critical factors arise from the high level of relative humidity developed by air conditioning systems, and the strong positive pressure generated by the air distribution system. Indications are that many modern air conditioned buildings "breathe in" at their lower floors and "breathe out" at their upper floors. The action of "breathing-in" generally occurs through doors or other openings. The "breathing-out" action at the upper levels is likely to occur through the exterior wall itself, particularly where windows are fixed sealed units, as is often the case in current North American practice.

This situation has in effect reversed much of our thinking about the design of exterior walls. Traditionally the exterior climate was regarded as the main problem in wall design and a great deal of research was devoted to the problem of sealing joints at the exterior face. We now believe that in many cases it is the interior climate, seeking to escape through the wall, that is the critical element in the development of a sound environmental barrier.

The changing relationship between exterior and interior climates described above is typical of the complex interplay of many elements that characterizes today's building problems. The appropriate response to these problems consists, in our opinion, of the systems design approach which attempts to take into account all the variables in a design situation. With respect to wall design, these variables differ for specific cases, but in general we have found them to consist of: exterior climate, interior climate (generated by the mechanical and electrical system), structure and appearance.

The Rain Screen Principle

Our office first became interested in a more scientific approach to wall design while involved in the construction of Place Ville Marie in Montreal during the late 1950's. This large high-rise project presented many difficult problems with respect to metal and glass curtain walls, masonry veneer walls, and exposed soffits. In developing solutions for these difficult problems, we turned for assistance to the Division of Building Research of the National Research Council, Canada's Government sponsored research institute. We were fortunate in being able to benefit from the pioneering work then being developed by the Division in the field of building science, particularly in the area of direct application of general scientific principles to specific practical problems. The achievement of this important link between the world of research and practice was largely the work of Dr Neil Hutcheon, Assistant Director of the Division of Building Research and his very able assistants, Mr G. K. Garden and Mr Max Baker.

The studies in the basic physics of the

environmental barrier carried out by the Research Council led to the development of a series of principles generally referred to as the "Rain Screen" principle. These general notions have for the most part led to the development of a double wyth wall although they are also applicable to single wyth construction. In terms of a double wyth wall, they can be summarized as follows:

- (1) The inner wyth should be designed as the actual environmental barrier with all joints fully sealed against infiltration or exfiltration.
- (2) The vapour barrier if required at all should be on the extreme inner face of the interior wyth.
- (3) The thermal insulation should be located on the exterior plane of this inner wyth. All structural members should be inside the plane of insulation so that the entire structure functions within the same climate.
- (4) The two wyths should be separated by an air space vented to the outside, so that the air pressure and climate in this space is identical with the exterior situation.
- (5) The exterior wyth should be designed as an open vented screen whose main function is to protect the inner sealed wyth from impinging rain or snow; as well as providing the visible façade material for the building. Wood shingles or horizontal metal louvers are examples of this type of "rain screen" principle in everyday construction.

The rain screen theory rejects the notion of a single miracle material sealing all joints at the exterior face to form an impenetrable barrier. Rather it proceeds by probabilities that attempt to take into account the fact that a wall is generally made up of several materials with different physical properties and different movement patterns. It is assumed that the exterior screen will deflect most of the impinging water on the wall — but should some enter the system the sealed interior wyth remains as a final barrier, and the water is drained out via flashed horizontal joints. From the inside-out it is assumed that the sealed interior wyth and a relatively continuous vapour barrier will prevent the migration of interior conditioned air through

1
 La Grande Salle, Place des Arts, Montreal
 2
 Vertical section through horizontal joint,
 Place des Arts
 Coupe verticale sur joint horizontal,
 Place des Arts

3
 Typical horizontal joint detail, Place
 Bonaventure
 Detail type d'un joint horizontal, Place
 Bonaventure
 4
 Place Bonaventure, Montreal

the wall, but our experience indicates that inevitably some interior climate is forced through the inner wyth by the positive pressure of the air conditioning system. Where this air is highly humidified it can condense and cause serious water or ice damage to the wall if it is trapped within the system by exterior sealed joints. The "rain screen" method insures that any inside air finding its way through the interior wyth will immediately be in an exterior climate, and air pressure within the air space; and can escape automatically through the exterior open joint system. The location of the plane of thermal insulation on the exterior face of the inside wyth is such that the dew point for humidified air cannot be reached within a sealed joint system. It is thus virtually impossible for condensation in the form of water or ice to occur within the wall – an occurrence that has often been the source of a great deal of trouble in wall construction in cold climates.

Of the four cases dealt with in this paper, three are examples of the double wyth "rain screen" wall. They are:

Place des Arts: a 3,000 seat opera house-concert hall completed in Montreal in 1963.

Place Bonaventure: a large multi-purpose urban complex in downtown Montreal, completed in 1967.

Arts & Cultural Centre, St. John's, Nfld: completed in 1967.

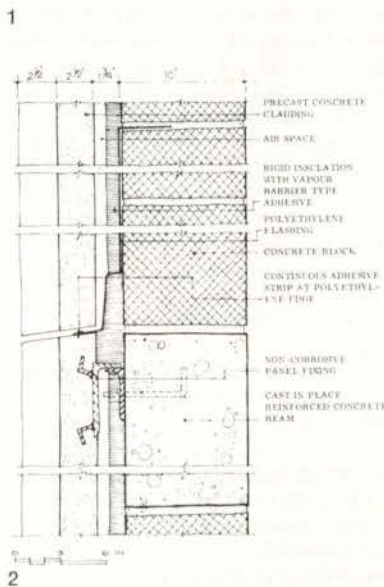
The fourth case differs from the first three in that it incorporates the basic "rain screen" principles into a single wyth wall.

It is the:
 Stephen Leacock Building,
 McGill University, Montreal,
 completed in 1964.

The wall design and construction characteristics for the four cases are summarized as follows:

Place des Arts:

The exterior wall of Place des Arts consists of an aluminum and glass curtain wall at the



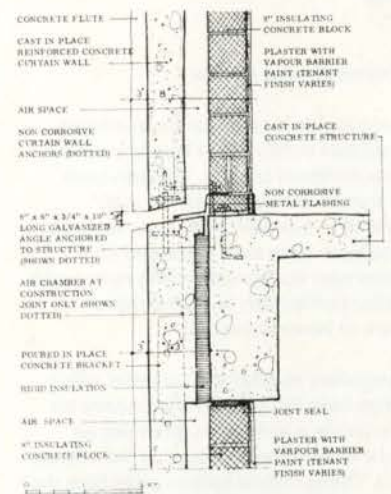
lobby and circulation spaces; and a precast concrete veneer wall at the stage house and back stage areas. This opaque wall was developed as a typical double wyth rain screen wall. The wall section from the interior to exterior is built up as follows:

plaster and paint interior finish; 10" concrete block (with reinforced concrete structural members in the plane); 2" rigid insulation fixed to the outside of the concrete block; an air space approximately 2" thick; exterior precast concrete panels with open joints both horizontally and vertically. The vertical joint is of a simple offset configuration and the horizontal joint is a shingle type section, flashed to the exterior with plastic flashing material.

The Place des Arts' opaque wall is a simple direct application of the "rain-screen" principle. The stage house wall particularly is a high exposed surface; and the interior climate is highly humidified with a strong positive pressure. So far (3 years of complete climate cycle) there has been no evidence of any trouble with the wall.*

Place Bonaventure:

The exterior wall of Place Bonaventure has much in common with the design developed for Place des Arts; but with one important difference – the exterior wyth is poured-in-place, rather than precast concrete. Careful cost analysis during the design period indicated that casting in place of the exterior panels was much more economic for this



particular job than precasting, even though this technique resulted in considerably heavier panels. The exterior "shingle" panels were poured with sliding corrugated metal forms, and were suspended from the spandrel beams leaving an open flashed joint at the bottom of every pour. The vertical joint consists simply of a butted construction point. This simple joint was judged to be appropriate as sufficient air movement and ventilation to the exterior was obtained by the open horizontal joint and by leaving concrete tie holes open. An air chamber, however, was provided at the back of the vertical joint to inhibit capillary suction of water through the hairline vertical construction joint.

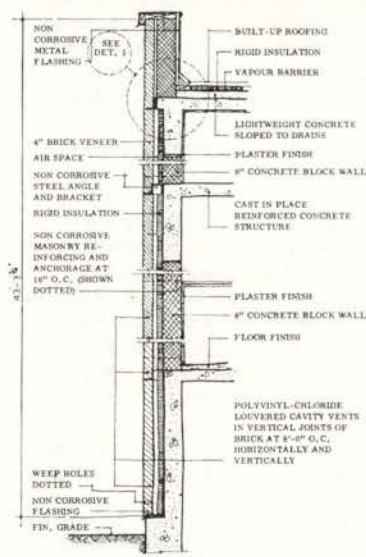
The inner wyth is separated from the outer by an air space approximately 2". This wyth consists of the reinforced concrete structure insulated on the outside and block infill. In this case a self-insulating block (Siporex aerated concrete) was used in order to avoid the difficult operation of adhering insulation to the exterior of the block while the exterior panel was already in position.

The disposition of materials and techniques in the Place Bonaventure wall in many respects is more directly related to architectural and cost factors than to the scientific bases of wall design. In many ways the poured-in-place concrete would have been a more appropriate material for the inner wyth, and a more inherently screen-like material for the exterior. It was, however, decided that concrete was the appropriate unifying material for the exterior façade from the point of view of urban design and cost factors. This enabled the infill material in the plane of the inner wyth to vary with respect to tenant considerations, providing a relatively impervious construction was maintained.

It is still too early to assess the Place Bonaventure wall in terms of performance.* The experience gained, however, in its design and construction has served to underline certain difficulties in this juxtaposition of materials — particularly related to the use of poured-in-place concrete as an exterior skin.



5



6

Arts & Cultural Centre, St. John's, Newfoundland:

While Place Bonaventure involved the application of "rain-screen" principles to a very unusual situation, the Arts & Cultural Centre in St. John's consisted of the application of these principles to a type of wall construction very common in Canadian construction, namely a brick veneer wall backed up by reinforced concrete structure with concrete block infill. The application of these principles did not involve any major changes in wall design, but consisted chiefly of a number of adjustments in detail from normal practice.

The plane of structure and block infill was completely insulated on the exterior with rigid insulation. The air space was vented to the exterior through the insertion of vented vertical brick joints in sufficient quantity to ensure an equalization of pressure and temperature between the air space and the outside climate. A stock plastic louvered vent designed to fit into a vertical brick joint was found on the market to fulfill the function of deflecting rain water but permitting the full passage of air. Intermittent vertical joints at the bottom of the brick veneer were left open and the wall was flashed to the exterior.

Panels of brick veneer were created by through vertical brick joints to enable the veneer to move in response to temperature changes. The air space between the two wyths was also panelized in order to cut down the extent and velocity of air movement through this space.

Newfoundland weather is characterized by extremely strong driving rainfall, combined with low temperatures. Recent experience with relatively large brick veneer buildings has generally produced bad results in terms of leaking joints, and efflorescence on brick. The Arts & Cultural Centre is a new departure for this part of Canada in that it deliberately opens up the exterior veneer to the outside climate rather than attempting to seal all joints at the outside face. The building has not yet gone through a total year's cycle as a completed unit. However, the performance of the wall during the winter of 1966-67 indicates that at least some of the traditional problems of exterior wall construction in Newfoundland have been successfully dealt with.*

Stephen Leacock Building; McGill University, Montreal, Quebec:

The structural system of the Stephen Leacock Building consists of a load bearing precast concrete wall; a precast concrete peripheral floor system, and a poured-in-place concrete central core. The wall is based on a five foot module with alternate members serving as load bearing columns and vertical mechanical chases. The precast panels are ten feet wide, with all vertical

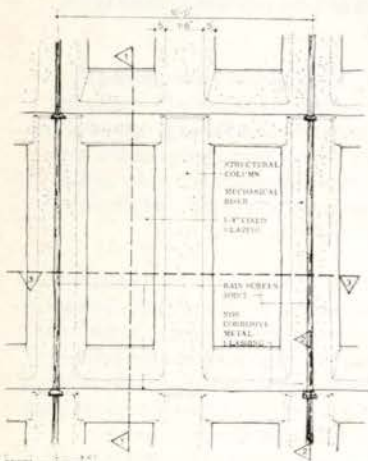
7
Stephen Leacock Building, McGill University, Montreal

8
Elevation, typical wall panels, Stephen Leacock Building, McGill University
Élévation de panneaux muraux types, Stephen Leacock Building, McGill University

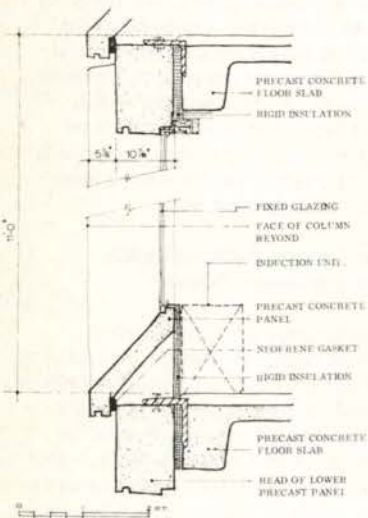
9
Vertical section through typical wall panel, Stephen Leacock Building, McGill University
Coupe verticale sur panneau mural type, Stephen Leacock Building, McGill University



7



8



9

joints occurring at the mechanical members. Horizontal joints occur at each floor and are of an overlapping "shingle" configuration.

The wall of the Leacock Building was designed to fulfill structural, mechanical and enclosure functions in a shingle wyth. It was therefore necessary to develop the three characteristic factors of a scientifically designed wall (rain screen, air space, sealed plane) through the joints rather than through the two complementary planes of a double wyth wall. Through the use of sophisticated pre-casting techniques, it was possible to cast the vertical and horizontal joints in a precise pattern that provided an open chamber at the exterior in which was hung a plastic rain shield, then an air pressure equalization chamber, and finally near the interior face a plane for the installation of the seal. After considerable research, a compressible neoprene tube was chosen as the sealant member. The gasket in the vertical joint was positioned just behind the gasket in the horizontal joint so that both could continue without interruption.

Insulation and vapour barrier were placed at the extreme inner face of the wall panel. This meant that the exterior structural wall exists in a different climate from the interior structural members – a situation that we do not regard as ideal; – but one that is somewhat mitigated in this case by the fact that the wall is panelized in both directions on a module of 10' x 10' thus allowing for differential thermal movement. The compressed neoprene gasket sealant also permits slight differential movement in the exterior wall without breaking the seal.

The Stephen Leacock Building demonstrates that it is possible to incorporate the "rain screen" principles usually associated with a double wyth wall into a single wyth wall by concentrating the characteristic wall functions entirely within the plane of the joint itself. This building has now gone through 2½ complete weather cycles and to date there has been no indication of problems arising with respect to the joints or other components of the exterior wall.*

*The references in the above paper were written in 1967 at which time very little feedback was available on the performance of the walls of the buildings. Since that time, although no specific information has been solicited, there have been absolutely no reports of poor performance. Normally an architect assumes good performance if not called back to a job with respect to specific problems. No such calls regarding the exterior walls of these four projects have been received to date.

Library Review

Urban & Regional References Supplement 1967.

Canadian Council on Urban & Regional Research Suite 308, 225 Metcalfe, Ottawa, 4.

Classified index relating to urban affairs in Canada divided into Sections together with an index by authors and locality. Major sections deal with physical environment, population and social characteristics, urban settlement, economics, transportation and communications, government and administration and urban development. A section of work in progress is also included.

Urban Renewal & Public Housing Vol. 4, Number 3, 1968.

CMHC Information Division, Ottawa, 7.

This quarterly publication contains a review of James Town, Toronto, the side effects of a renewal programme in Hamilton and an article on the new Federal task force on Housing & Urban development.

Events

The 1969 Athens Ekistics Month, a series of meetings and seminars on Society and Human Settlements, will be held from July 7th to August 1st, 1969. Write P. Psomopoulos, Director, International Programs, Athens Centre of Ekistics, P.O. Box 471, Athens, Greece, for registration form and program.

Climate Chart: An Exercise in Visual Communication

Besim Hakim, MRAIC
and Anthony Mann

Mr Hakim is Assistant Professor at the School of Architecture, NSTC, Halifax. Mr Mann is Associate Professor at the Nova Scotia College of Art and is a visiting lecturer at the School of Architecture

The charts illustrated here were produced by first year students at the School of Architecture in the Design Workshop course during the current session.

The emphasis in this course is upon communication and systems as related to visual design. The student is encouraged to develop a wide vocabulary in verbal and visual media. The projects are planned to explore different aspects of visual communication, including the preparation of charts, diagrams, presentations and reports.

The problem in this instance (Climate: Its

Characteristic Features) was to obtain information relating to the climate of Halifax, Nova Scotia, and to organize this information in a form which could be most easily used by architects.

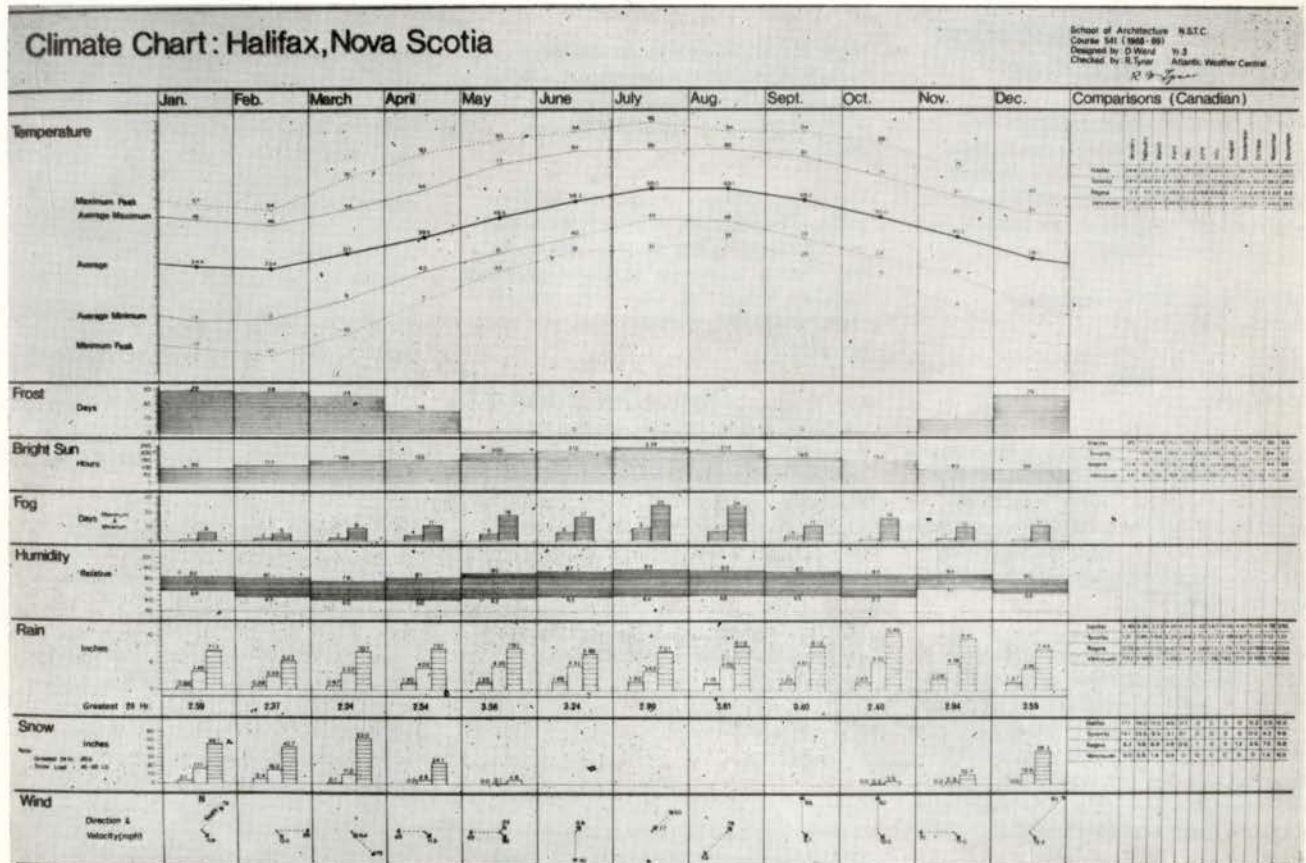
The climate information was gathered by the class as a group and individual solutions to the problem were then produced by each student. The best five charts were selected by the group and the design having the greatest potential was then revised.

This final revised chart is being used by students throughout the School in analyzing climatic problems affecting their projects in

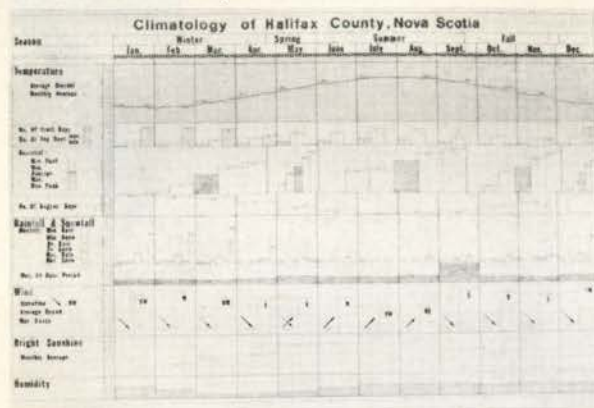
the Architectural Design courses. We are making this chart available to local architects and to anybody else who might find it useful; and in this way the students are given an opportunity to contribute to the community and to make contact with local architectural offices.

It was felt by the students that the value of the project lay in the experience gained in analysing and structuring complex information, and in developing graphic symbols and layouts so as to present the data in a form most easily understood.

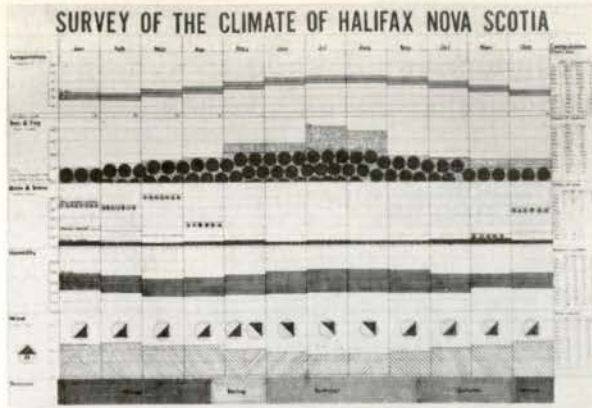
B. H. and A. M.



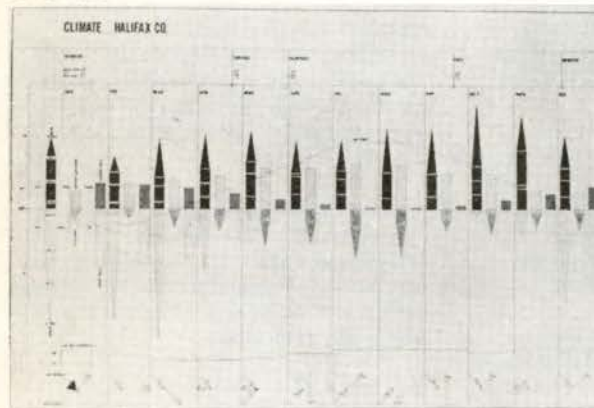
The final revised chart by D. Ward



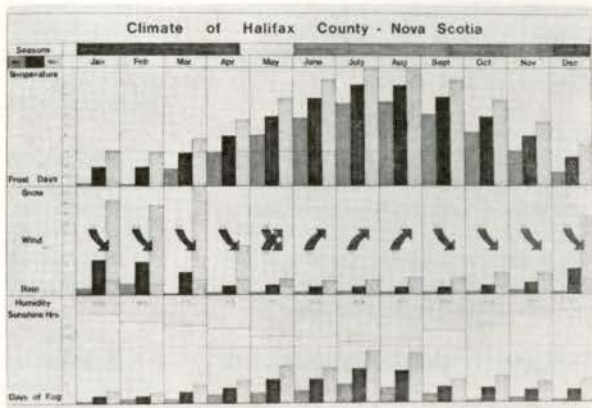
G. Robinson



J. Hancock



M. Bruckner



B. Johns

Architectural Education and the Humanities

The Student Contributing Editors were invited to submit comments on the topic: *The Place of Humanities in the Study of Architecture*. Contributions have been received from students at four schools and they are printed below.

"Liberal education grossly under emphasized"

University of Manitoba
Brian Eldred

It is our contention that study in the humanities for architecture students is presently inadequate. A broad, liberal education would help students in their personal development, and would enable them to better cope with the wide variety of personalities they must work with.

The architect, as a professional, must in many cases function as a businessman, planner, construction supervisor, educator, promoter, developer and possibly "socialite" as well as "designer" — his traditionally accepted role. His undergraduate jargon leaves him ill-equipped to communicate the problems that these roles imply.

The architect must, as well, be able to discuss architectural problems with his clients, who are often members of other professional groups. As presently educated

the architect is no match for the more broadly educated lawyers and businessmen that he finds himself confronted with. He is, in effect, "ignorant" of all but his own discipline.

The evolving Environmental Studies program, in our opinion, does little more than pay lip service to this problem. We do not feel that the "technical" is overemphasized; however, liberal education in the present 5-year program is grossly *under* emphasized.

One solution might be the requirement of a Bachelor of Arts degree prior to a three year architectural program, or its integration with a six year program. Another might be the expansion of the Environmental Studies program to provide a firm intellectual basis for our emerging architectural humanism. □

"Cultural and Historical Factors Course emphasizes the importance of the humanities"

University of Waterloo
Peter Dandyk

One of my principle reasons for a choice of architecture as a career was based on the understanding that this profession was a bridge between the humanities and the sciences. To me, architecture seemed to combine the best of both into a vital and stimulating arrangement.

The study of the humanities is obviously a requisite for any architectural program. This requisite is fulfilled in the program at Waterloo, especially in a course entitled "Cultural and Historical Factors". Although having only experienced one term to date, for me this course emphasizes the importance of the humanities to this technologically overbearing era. Combining history, psychology, literature and sociology, not as a rigid set of disciplines, but as a pliable group of constituents, the course expounds on symbolism, iconography, conventions and myriad other phases. It draws from works including *Oedipus Rex*, *The Tempest*, *The Bible*, *Catch 22* and a host of literary masterpieces, and is augmented by films, lectures and discussion. □

"Rigid system stifles true education"

McGill University
R. B. Rayside and D. Estall

McGill School of Architecture has had, for many years, a course program which offers no options. Although this situation will presumably change in the coming years, the student has so far had little opportunity for more than a restricted training. While it must be pointed out that the humanities are indirectly introduced into some courses, the rigid nature of the entire system, so directed, stifles true education.

The relative absence of humanities at this and other schools has apparently contributed to the lack of communication and

understanding among members of the architectural circles, and between them and the public. In these years of a widespread increase in social awareness, the architect, apparently lagging behind in appreciation of the human element, often seems insensitive toward social change. As a result, there is a danger that architects forget that their designs must relate to people's well being, both physical and psychological. Instead, they tend to overemphasize the importance of the increase in technological details. Such general insensitivity, and the inability to apply or relate existing awareness of the human aspect, has led to such disasters as the many ineffective urban renewal projects now in existence.

This question of application is an extremely difficult one, but before it can be approached there must be increased social awareness on the part of architects, and we feel this can best be achieved by the increased availability and flexibility of humanities studies in the university program. □

"Considerable freedom should be given to the student"

*Carleton University
Yves Gosselin*

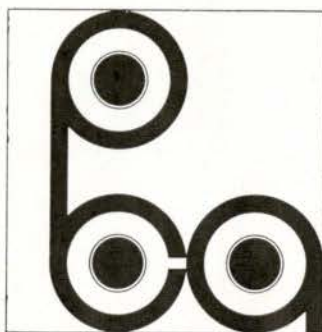
I believe that all schools of architecture should make a meaningful attempt to integrate such disciplines as sociology, psychology and philosophy into their programs. The purpose of this integration would be to present a number of approaches to the study of man and his world because the student must not forget that the human elements in design are most important.

The architect who is designing a dwelling must never forget that his product is not a monument to his genius but a structure that meets the demands of the client. But in meeting these demands he must not sacrifice the aspects which are considered essential by the people who will live or work in the building. The question is now what type of education produces this type of architect. Walter Gropius believes "that every healthy human being is capable of conceiving form. That the problem was not all one of existence of creative ability but more of finding the key to release it." The design process implies a renewal of this principle every time we are confronted with a project. If an architect must start with something as vague as a general social need, then he must be able to understand the social requirements behind the building. This is where a knowledge of the humanities is obviously needed along with technical training.

The way the humanities are taught is also extremely important. Considerable freedom should be given to the student trying to learn the various disciplines. A comprehensive reading list should be provided at the start of the academic year to enable the student to study the whole spectrum of the humanities, but at his own rate of assimilation. □

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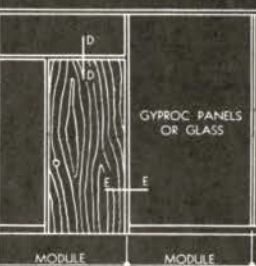
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On the Allied Arts Column

The Editors:

While I sincerely congratulate your magazine for the publication of the Allied Arts Catalogue and I do not disagree with Miss Aarons and some of her opinions, her latest blurb for herself in the November issue needs some tempered intelligence.

She has indeed illustrated to us that in many instances lack of taste and discretion has allowed us to encourage expensive mediocrity. It isn't very difficult to illustrate that misplaced naturalism works less well than tasteful abstraction. This point has been well taken by all of us reared in the Bauhaus tradition.

What is lacking besides a self-critical attitude (since Miss Aarons seems to believe her own publicity) is a proper discussion within the area of what is accepted as contemporary form. Unfortunately neither the Trudeau, the Redinger nor the Bush (*November, pages 25-27*) has resolved successfully any of the problems created by the lack of coordination between architect and artist. The danger is that you have simply created a handy reference of "instant decoration" for architects. This is similar to the rubber stamp trees in plan and elevation which save us so much time and energy.

What is still lacking is an intelligent discussion in your journal of the form and content of various artists. What is required of architects is that they educate themselves sufficiently to appreciate which of our artists are producing something of lasting value that could be translated into a form that would become an important element in the fabric of a building. You don't really provide much of a service when you illustrate a Jack Bush painting hung in a corridor at Scarboro.

There are indeed many of our architects and artists who are thoughtfully resolving in their own time and place what their conceptions of current creative problems is. Lacking self criticism, seduced by our own publicity, we are in danger of a superficial approach and superficial achievement.
Burrett Swartz, Ottawa

Criticism is always welcome. Most of the points of complaint in the above letter however have been covered in articles throughout the allied arts column since 1965.

The policy of presenting the "scene" through visual matter (the only real presentation of "form and content") rather than creating a few "stars and their dialogue" was intended to encourage the architects own intelligence of the scene rather than this column being an arbiter of "taste" or what goes for being "accepted". It is regrettable that plain fact was read as self-praise but the services alluded to have been created for just those artists and architects who would work to find the way themselves rather than recommending prize solutions.
A.A., Editor Allied Arts

The Editors:

While I am aware of and applaud your achievement, I think there are inherent dangers as I pointed out. As an architect and a painter I don't think we need much of a semantic dialogue to discover we are very much on the same side.

I think *Architecture Canada* has developed into one of our best journals which is a surprise but very much a result of the success of the architectural revolution for which Canada has proved fertile ground. Reviewing your two catalogues it seems obvious that a great deal of exciting formal research and results are taking place. The fact that you have illustrated this and will continue to do so is important and necessary.

What I suggest is a necessity for broader criticism. I do not suggest that the artist explain himself but rather that he be examined in depth in form and content. We would I am sure choose the Ronchamp chapel over the Coventry cathedral critically, but in order to understand why we would have to go beyond Le Corbusier as simply an inventor of forms. Somewhere in the back of my stubborn old fashioned Jewish mind, I feel that what the artist says is important, that some will say it better than others and that I am concerned only with the best.

It is possible for a country to destroy its creative people by over praise as well as neglect. Only the provision of a proper cri-

tical forum with a proper perspective will maintain the healthy environment required for us to achieve what we have so far promised. Because there has been a failure in most of our journals to provide this, the ambitions as well as the achievements of *Architecture Canada* are important.
Burrett Swartz

Allied Arts Catalogue Lauded

The Editors:

We recently purchased your Allied Arts Catalogue, Volume 2, and also as we had not acquired it at the time of publication in 1966, Volume 1. These are excellent books, the material is well presented, artistic, contemporary and most interesting. It would be appreciated if we could be put on your mailing list and be notified of any future issues.

A. E. Cook, Chief of Design, Western Region, DPW

The Editors:

Thank you for the copy of Volume II of the RAIC Allied Arts Catalogue. The work of Canadian architects, artists and craftsmen is gaining world-wide respect and renown and the reason is obvious after reading this book. Your institute is doing a tremendous service in issuing this Catalogue and I would, again, like to express my gratitude for the copy I received.

Arthur Laing, Minister of Public Works, Ottawa

More on Venturi and Wolfe

The Editors:

The October issue was great. Let's hear more of Robert Venturi and Tom Wolfe.
A. Hanna, MRAIC, Winnipeg

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Advertisements for positions wanted or vacant, appointments, changes of address, registration notices, notices of practices including establishment or changes in partnership, etc., are published as notices free to the membership.

Registrations

The Architectural Institute of British Columbia, October, 1968: Richard G. Henriquez, B.Arch, M.Arch; Paul Patrick Terence Jones, B.Arch; Rajesh Sehgal, B.Arch; Lawrence Christian Haave, B.Arch; John Gilbert Young, B.Arch; December, 1968: David Nicholas Spearing, B.Arch.

The Alberta Association of Architects, January, 1969: L. H. Loh; K. M. Shimizu; H. Michaelian; G. J. Zimbachs; N. O. Jackson; A. G. Traish; William R. Davis; Anthony Hargreaves

British-Canadian Exchange Wanted

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

Positions Wanted

Graduate architect from Bombay and associate of Indian Institute, 26, four years experience as draftsman and three years as an architect with an English firm in Arabian Gulf, seeks position as architect or draftsman. Write, M. Dhar, 773, Euclid Avenue, Toronto 4, Ontario.

Graduate architect seeks position as architectural draftsman, anywhere in Canada or U.S.A. Nearly 5 years experience in educational and commercial buildings. Write to Srichand Vanvari, B.Arch., AIA, 21 James Street, Apt. 503, Ottawa 4, Ont.

Architect-planner, AIA, available for employment until March 1970. Six years Indian experience, one year in England. Contact D. Pandya, 23 Bellevue Bank, Gateshead 9, Co-Durham, England.

Filipino architect, 24, graduate of University of Santo Tomas, 1966, experience in general drafting and perspective line drawing, seeks position in Canada. Write Wilfredo E. Bautista, 373 General Luna Street, Malabon, Rizal, Philippines

Young architect presently working in an architectural firm doing perspectives and presentation drawings, seeks job in any part of Canada. Member of all-India Institute of Architects. Please contact R. K. Chopra, A-26 Kailash Colony, New Delhi (India).

Architectural draughtsman from Kingston, Jamaica, W.I., with eight years experience in the preparing of working drawings for commercial, industrial, and domestic projects and holds the construction technician's certificate from the City and Guilds of London seeks position. Reply: B. Pearson, 43 Hawkedon Crescent, Rexdale, Ontario.

1963 Graduate in Architecture from Roorkee University, India, Master from the University of Brasilia, office experience in Chandigarh, apprenticeship with Oscar Niemeyer in Brazil, one and a half years teaching experience at the University of Brasilia and a member of the Brazilian Institute of Architects, presently working as a part-time architect on the Capital Project (Novacap), Brasilia seeks position in Canada. Reply Arquitecto Shyam Janveja, Caixa Postal 2516, Asa Norte, Brasilia, Brazil.

U.S. Architectural technician, 32 years old, married, 3 children, wishes to relocate in Alberta or Saskatchewan. Eight years experience includes design development, working drawing production and construction supervision. Write or call Ronald Mate, 331 Oakland Drive, Michiana Shores, Michigan City, Indiana 46360, Tel. area 219-872-4774.

Architectural assistant, university graduate, migrating from Australia in late 1969, requires position in an office, preferably in Ottawa. Experience, four years in Sydney offices, student member of RAIA for four years. Further details from Iain Powell, 6 Harrington Avenue, Turrumurra, 2074, New South Wales, Australia.

Female student of architecture qualifying July '69 from British school of architecture, with one year experience in British office, emigrating to Canada seeks permanent position. Reply: Samia Naman (Miss), YWCA House, Hull, E. Yorks, U.K.

Artist

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

Member of Royal Institute of Architects of Ireland, two years post graduate experience, working for private office, age 24, seeks employment in Toronto office from March (1969). Write, Eamon Hand, Dip. Arch., MRIAI, 28 St. Alphonsus Road, Drumcondra, Dublin 9, Ireland.

Architect-Planner, B.Arch. in 1964, and M. Tech in 1966, with 2½ years of varied experience seeks a suitable job as architectural or planning assistant. Write: S. B. Andalkar, 76 Osborn Road, Newcastle-upon-Tyne 2, England.

Chinese architect, 25, B.Arch., Liverpool, over one year office experience in U.K., seeks a permanent position in Toronto. Contact: Philip Shaw, YMCA, 40 College Street, Toronto.

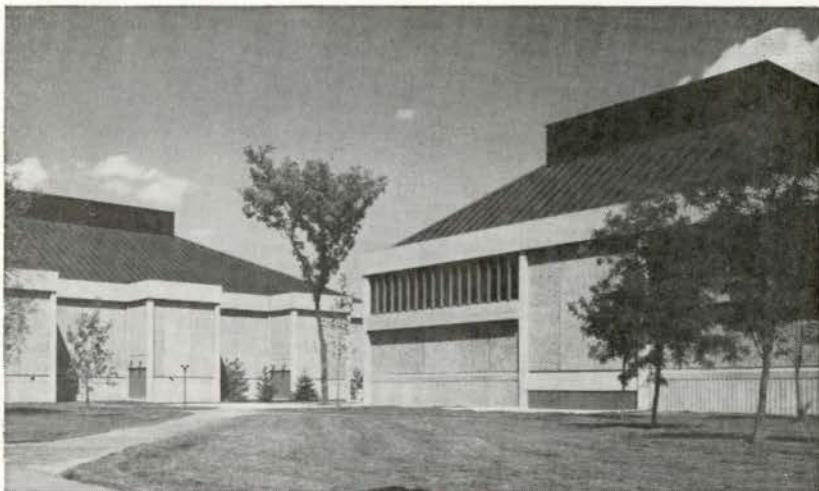
29 year old architect's assistant, Diploma in Architecture, Birmingham School of Architecture, seeks employment in Toronto area. Four and a half years experience in England on schools, hospitals, universities, design, working drawings, specifications and schedules. P. Woon-Fat, 280 Wellesley Street, East, Apt #405, Toronto 5, Ontario.

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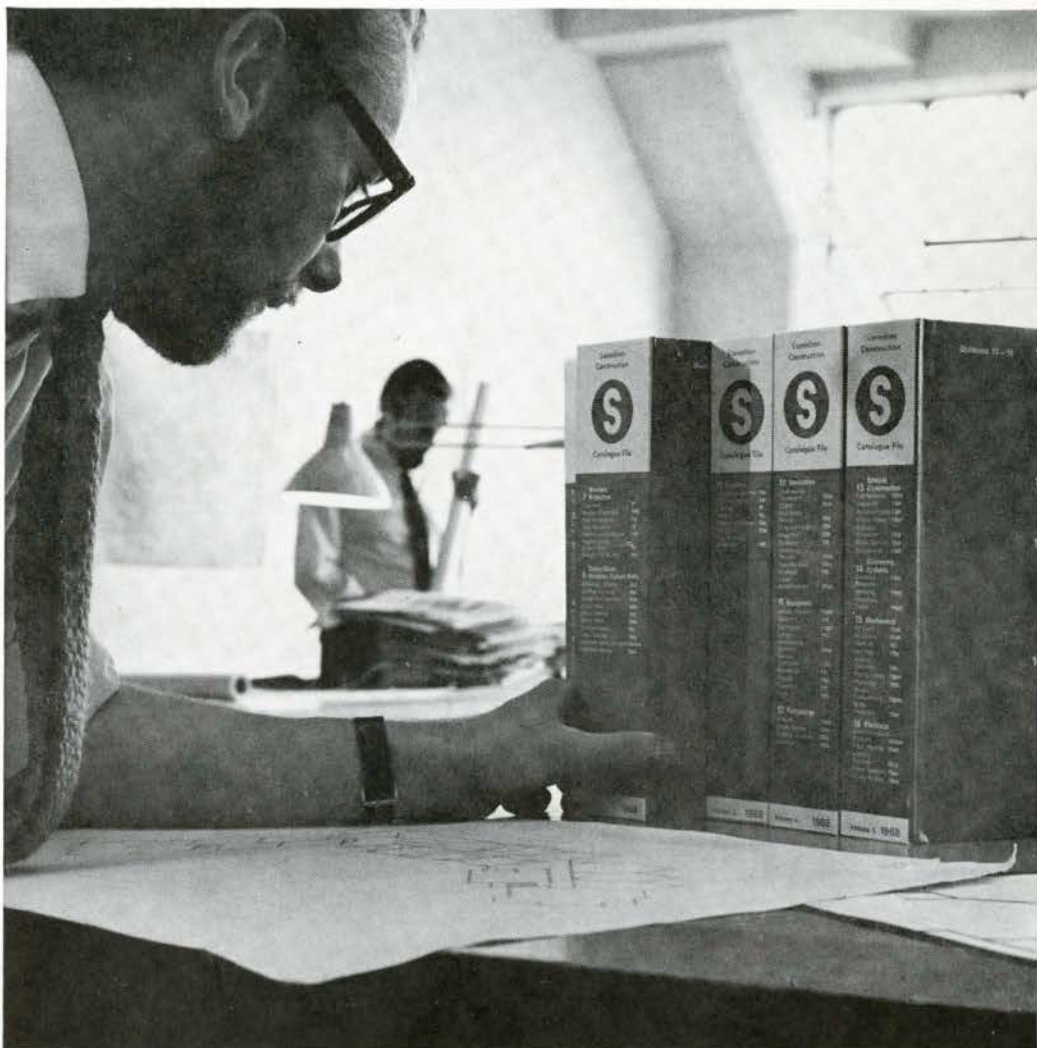
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