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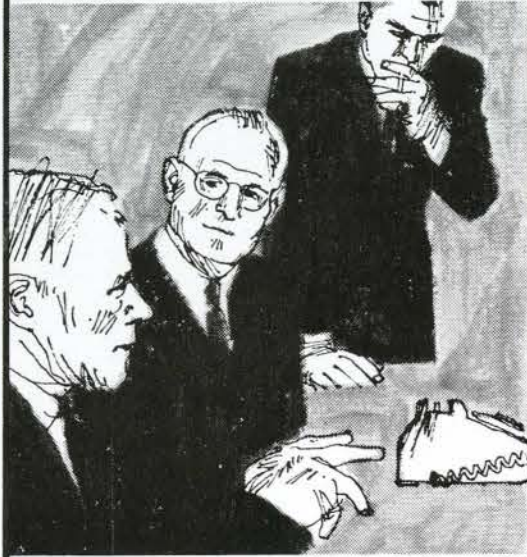
**JOURNAL**  
RAIC · L'IRAC  
AUGUST 1965 AOUT



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# JOURNAL

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Journal of The Royal Architectural Institute of Canada/Journal de l'Institut Royal d'Architecture du Canada, 160 Eglinton Avenue East, Toronto 12, Ont. • Editorial/rédaction 487-4714 • Advertising/publicité 485-6561 Toronto; Vancouver, 165 W. 40th Ave, FA 7-3388; London, England, 122 Shaftesbury Ave, W.1, GERrard 7459 • Subscription/abonnement \$7.00; Foreign/étranger \$8.00 • The Journal is not responsible for opinions expressed by contributors/Les opinions exprimées dans le Journal ne sont pas nécessairement celles de l'Institut • Authorized second class mail P.O. Dept Ottawa and for payment of postage in cash.

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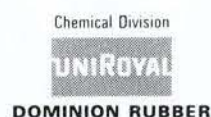




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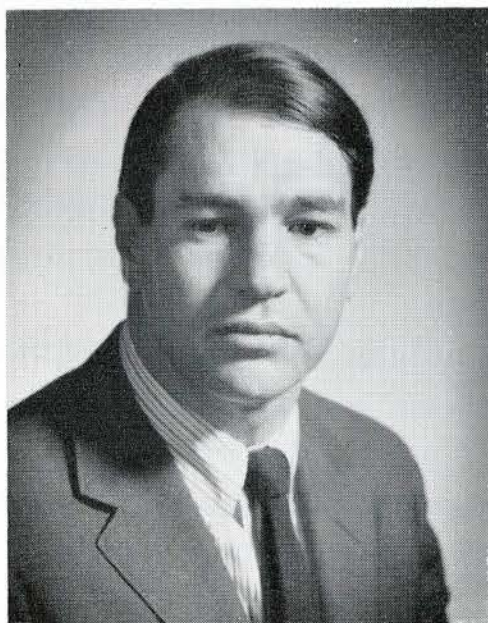
# News

## JOURNAL ASSOCIATE EDITOR

Appointment on 1 July of Professor A. J. Diamond, MA (Oxon) MArch, MISAA, MRAIC, Toronto, as Associate Editor of the Journal of the Royal Architectural Institute of Canada is announced by Walter Bowker, *Journal* Managing Editor.

Professor Diamond, who is in charge of the Graduate Design Course at the University of Toronto School of Architecture, was born in South Africa in 1932. He received his undergraduate architectural education at the University of Capetown, and was awarded his bachelors degree with distinction. He obtained an MA at Oxford in Politics, Philosophy and Economics in 1956-58, and a Blue for rugby. Subsequent to this he was in private practice in Durban, South Africa, in the firm of Diamond and Hallen until 1961. During this time he was fifth year thesis critic at the University of Natal School of Architecture, and was active on the science committee of Natal Provincial Institute of Architects.

In 1961 he attended the University of Pennsylvania, to study for his master's degree in architecture under Louis Kahn, after which he taught in both the Graduate School at the University of Pennsylvania and in the evening classes at the Drexel Institute of Technology in Philadelphia. During this time he was a senior designer in the firm of Vincent Kling. Prof. Diamond is an associate member of the American Institute of Architects, and while in Philadelphia was a member of Edward Bacon's committee on Municipal Improvements.



A. J. Diamond

In 1964 he came to Toronto to inaugurate and conduct the Graduate Design Course of the School of Architecture of the University of Toronto, and to join John Andrews in practice. Prof. Diamond was the recipient of the Thornton White prize and the Marley Scholarship in South Africa, was awarded an Italian State Bursary, and a Graham Foundation Scholarship in the U.S. He is married and has two children.

## CHAIRMAN OF JOURNAL COMMITTEE

The appointment of R. G. Cripps, of Weir, Cripps and Partners, Toronto, as Chairman of the Journal Committee has been announced. He succeeds Loren A. Oxley (*F*) of Somerville, McMurrich and Oxley, Toronto, chairman since 1962.

Mr Cripps, born in Toronto, studied at McGill University from 1939 to 1942, when he joined the Royal Canadian Air Force, serving as a ferry pilot in 1944-45. After the war, he returned to the McGill School of Architecture, graduated in 1947 then joined the firm of John B. Parkin Associates, Toronto. In 1952 he entered practice with John Weir.

Mr Cripps was Chairman of the Specification Writers Association in 1960, a member for two years of the Canadian Housing Design Council and is presently a member of the OAA Housing Design Committee.

## ARCHITECTURAL EXHIBITION, MADRID

To present new trends in North American architecture, the Institute of Spanish Culture is assembling an exhibition called "Present Day Architecture in America" to be held in Madrid this fall. A number of submissions have already been received from the USA

and Canadian work is solicited. Architects wishing to take part in this exhibition should send 8 by 10 inch glossy prints showing three or four views of work carried out by them, together with plans and an explanatory account to: Comisaria de Exposiciones del Instituto de Cultura Hispanica, Avenida de los Reyes Catolicos, Ciudad Universitaria, Madrid 3, Spain. Buildings may fall into any category, but must be erected within the last 20 years — preferably within the last five or six. The exhibition is not a contest; its object is to present in Europe the most complete range possible of the personalized and original aspect of present day architecture in America.

## AIA JOURNAL EDITOR

Robert A. Koehler has succeeded Joseph Watterson, FAIA, as editor of the Journal of the American Institute of Architects. Mr. Koehler, a professional journalist, joined the AIA Journal staff in 1953 after six years as editor of *Architecture/West*, a US regional architectural magazine.

## J. E. WHENHAM TO OTTAWA POSITION

J. E. Whenham, partner in the Winnipeg Architectural firm of Moody, Moore, Whenham and Partners and President of the Manitoba Association of Architects for the past two terms, has accepted the position of Director of Physical Plant at Carleton University, and moves to Ottawa in August. D. H. Carter (*F*) has been elected by the MAA Council to succeed Mr Whenham, and M. P. Michener succeeded Mr Carter in the position of Vice President.

## H. N. SEMMENS, FRAIC

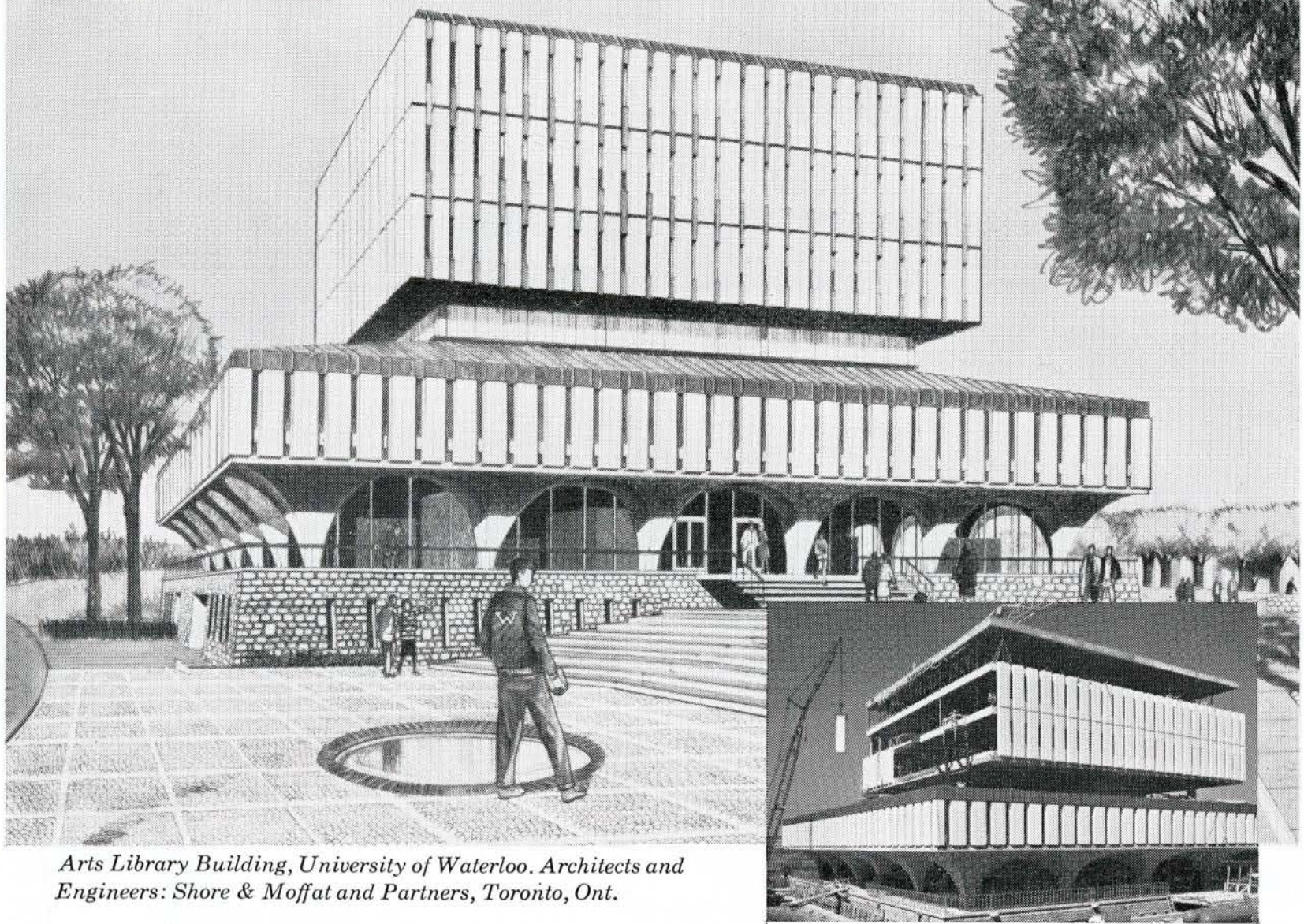
Word has been received of the death on June 27, 1965, in Lachine, Quebec, of H. N. Semmens, (*F*). He was born in 1914 in Saskatoon and practiced in Winnipeg with his uncle, J. N. Semmens, until the outbreak of World War II. After the war he settled in Vancouver and practiced alone until 1949 when he joined with Douglas Simpson in the firm of Semmens and Simpson. This firm was the first to be awarded a Massey Gold Medal in 1952, for the Marwell Building. Subsequently it won two Massey Silver Medals for the Vancouver Public Library and the B C Sugar Refinery. The partnership was dissolved in 1956. In 1962, he moved to Montreal where he joined the CBC architectural division and later became chief architect for Canadian Industries Ltd.



R. G. Cripps



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portland cement. For contrast, the surfaces of the base columns were bush-hammered for greater texture. ■ By scheduling curing over weekends, the 20 arches were placed in 10 weeks, using only two sets of split steel forms. The two arches placed each week were directly opposite each other on either side of the previously placed floor system, so they could be post-tensioned in place. ■ Not only for beauty, but for structural efficiency and economy as well, architects throughout Canada are turning to modern concrete for structures of every type and size. Write for free literature to nearest district office. (Canada and U.S. only.)

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A second international competition for carpet designs, with prizes of £400, 100 and 50 has been announced by Carpet Trades Ltd., P.O. Box 5, Mill St., Kidderminster, England from whom entry forms may be obtained. Closing date October 30, 1967.

#### Practice Notes

"Dobush Stewart Bourke, Architects, wish to announce the opening of a branch

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"Grant R. Sauder, B.Arch., MRAIC has commenced architectural practice on July 19, 1965, in the Province of Ontario at the Pine Street Shopping Centre, Thorold. Trade literature is requested and sales representatives are asked to call."

#### NORMAN L. THOMPSON, MRAIC

Norman Livingstone Thompson, one of the three remaining charter members of the Saskatchewan Association of Architects, died in Saskatoon on April 24th, 1965. He was 82 years old.

Mr. Thompson was born in Hull, England, and received his architectural training in the office of his father in that City. He practised five years in England before coming to Canada in 1906. His first employment was with the engineering department of the Grand Trunk Pacific Railway and he was engaged on the construction of the bridge over the South Saskatchewan River at Saskatoon. He liked the budding city and set up his first office here in 1907. The firm of Thompson, Daniel and Colthurst was formed on May 1st, 1911, and was very active during the boom which preceded the first world war. Probably the firm's most outstanding building, constructed during that period, is St John's Anglican Cathedral — a fine example of gothic architecture. Mr. Thompson returned to England in 1919, but came back to Canada in 1923 and settled in Moose Jaw. In partnership with Henry Hargreaves he designed, among other buildings, the Moose Jaw Technical School and the Natatorium in the same city. In 1942 he returned to Saskatoon and was District Resident Architect for the Federal Department of Public Works at the time of his retirement.

He was active in his profession after his retirement and was supervising architect on various buildings on the University campus and elsewhere throughout the city. These included the new Post Office and renovations to the Federal Building. Mr. Thompson was a member of Knox United Church, the Saskatoon Rotary Club and was a life member of the Saskatchewan Association of Architects. He is survived by one son, Marshall M. Thompson of Saskatoon and two daughters, Miss Louise Thompson of Calgary and Mrs. T. A. Collison, (Florence) of London, Ontario.

*E. J. Gilbert, Saskatoon*

The Ontario Department of Education has asked for assistance in collecting slides on school architecture to be used in talks to various groups. Members are asked to forward 35 mm slides of interior and exterior views, along with the name of the school, architect and the building's completion date to: The Secretary OAA, 50 Park Rd., Toronto.

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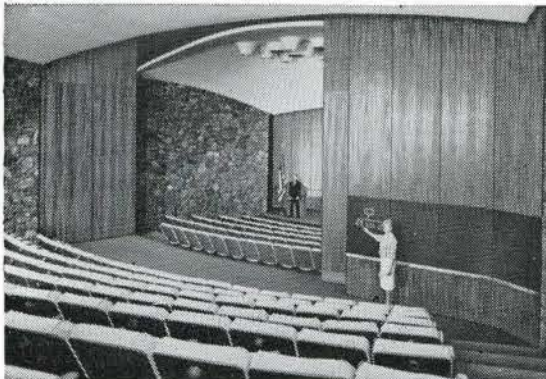


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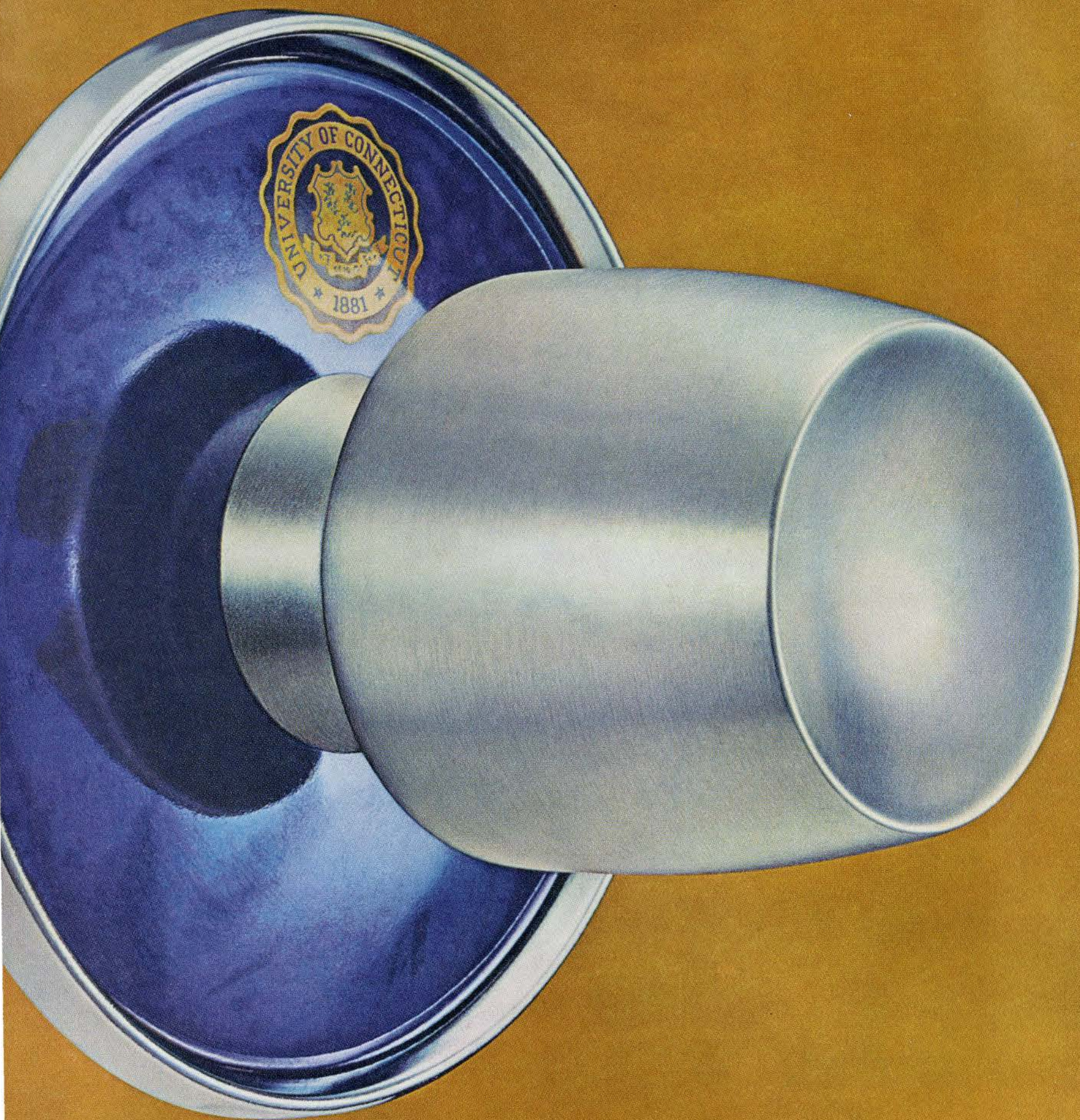
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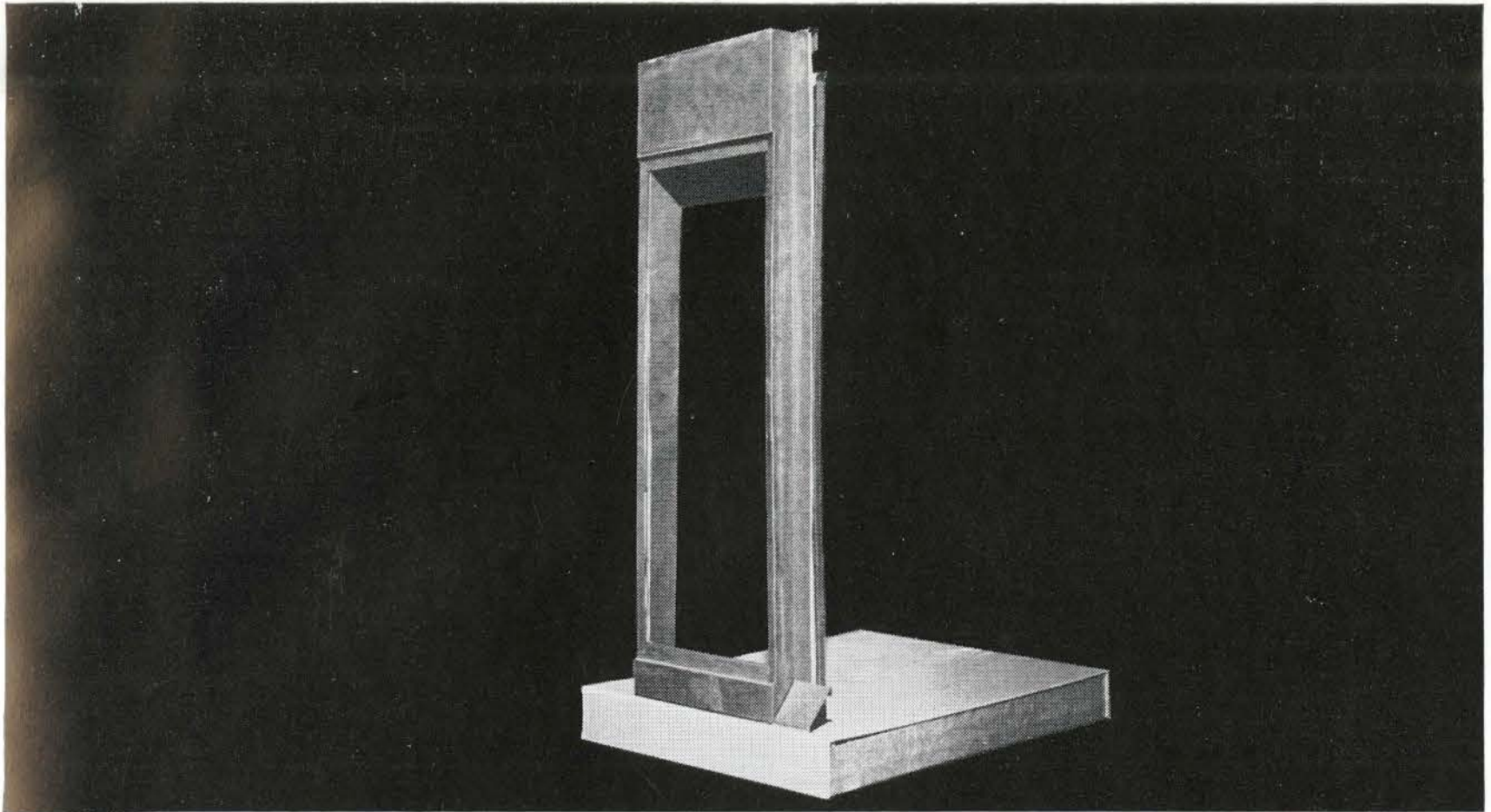
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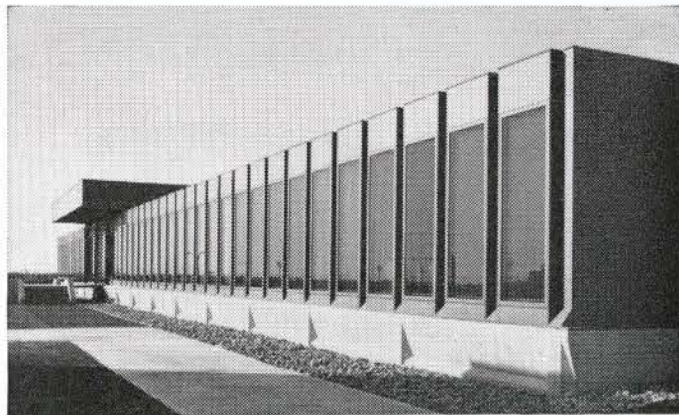


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Civic Centre, Chomedey, Quebec  
Architect: Affleck, Desbarats, Dimakopoulos, Lebensold & Sise

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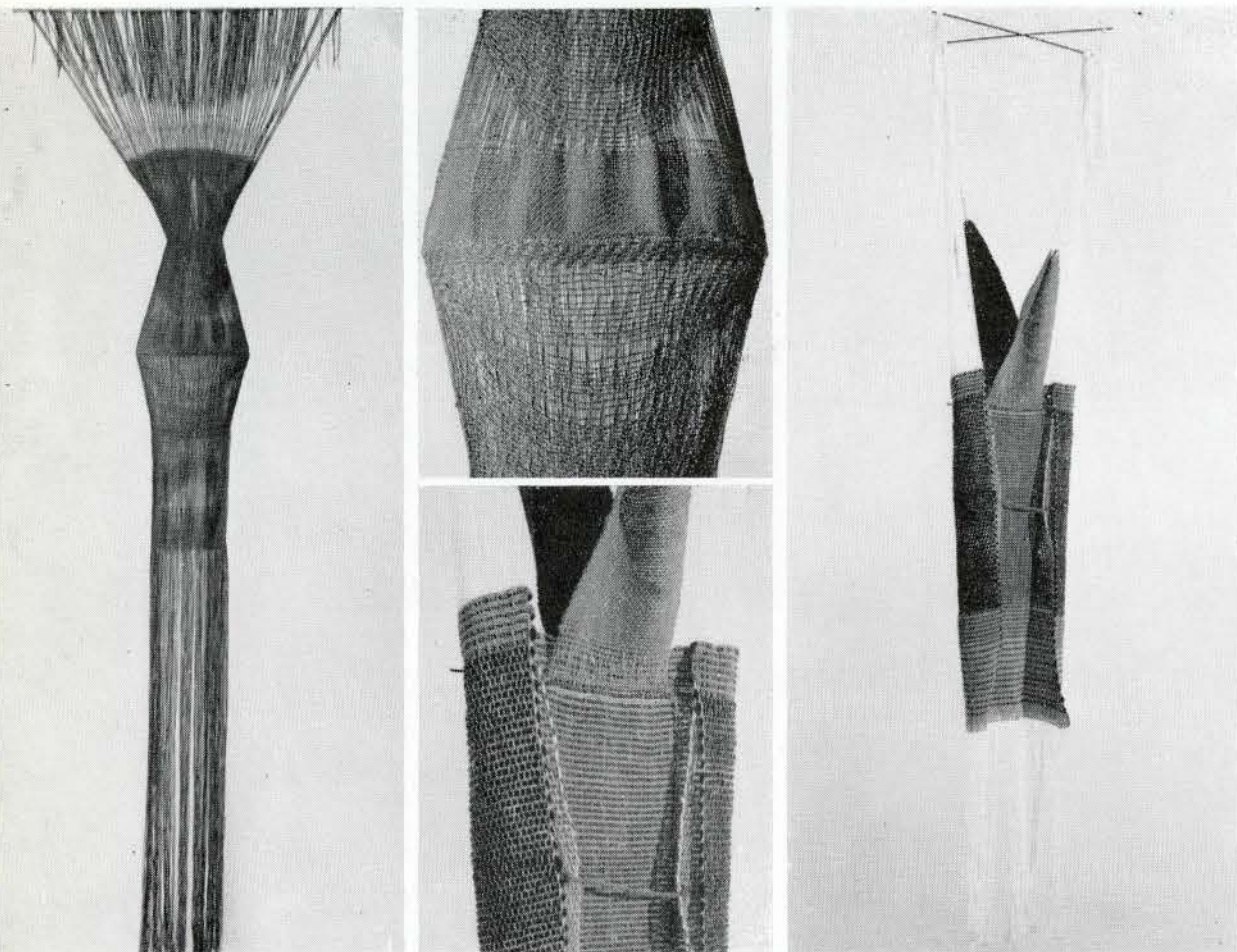
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by Anita Aarons, ASTC, (Sculp)

## Miscellaneous Happenings

Art and Architecture



### Tapestries as Architectural Decor

The new Royal Bank of Canada building on King Street, Toronto (architects Marani, Rounthwaite and Dick), features two enormous tapestries in the main banking hall. One cannot complain here of too much subtlety or lack of public confrontation. A heroic and important experiment in tapestry hanging as decoration in semi-public building in Toronto, I hope more will come of the experiment. The tapestries, 19 x 30 feet, were designed by G. Franklin Arbuckle, RCA, Toronto, and executed on the looms of Mme Suzanne Goubely at Aubusson, France.

I believe certain contemporary handcraft weavers in Canada, if given the opportunity to perform on a large scale, which has been done in U.S.A. with local American draftsmen, could provide, direct, something more exciting and contemporary than painting translated into tapestry. Again, conformists will not quarrel about the result and when the building ceases to function, doubtless the tapestries will be rescued and hung in a museum, but hardly as

1965 Canadiana or as examples of contemporary idiom.

Which brings me to some items of interest in local exhibition. Mrs Charles Lindgren exhibited at the Dorothy Cameron Galleries some delightful, elegant and exciting hangings and tapestries, exquisitely woven, which if produced or extended to larger scale have great architectural potential. Some architect could well use them in stairwell or lobby design. The examples illustrated were not shown in the exhibition, but are typical of the technique.

### Allied Arts Department Interest — Who Else?

Interest in our new Allied Arts Department is feeding the *Journal* with information of minor works being executed in less accessible buildings than we usually encounter. Some lesser known architects and artists are doing valuable and interesting work in art and architectural collaboration with little fanfare or publicity, but with much sincerity and integrity. Not all of it is top grade production but displays sin-

cerity and some ability. An example is the office-factory building of Sarco Canada Ltd, in Scarborough, Ontario. Architect in charge for Marjesson Associates was Wilfred R. Ussner. A modest low cost building and thoroughly honest piece of architecture whose client in showing me around was obviously well pleased to have risen above mere commercial need. A quite delightful mural wall of terra cotta elements made by Greta Dale confronts one in the entrance lobby. By circular artifice it directs one up the steps and by continuing beguilement to the enquiry desk. It is equally visible from the exterior glass portals. Wall and decoration are so thoroughly integrated in form, color and texture that there is no clear definition where one begins or ends. I suspect the architect's original visualization inspired the artist (whom I have not met) but who ever had the original idea, the architectural solution is excellent and the natural overhead lighting, sunlight and shadow, from bubble cells, very successful. In a black and white building, the warmth and color provided by the mural with its terra cotta forms, sometimes discreetly glazed, both figurative and non-figurative, is a welcome relief.

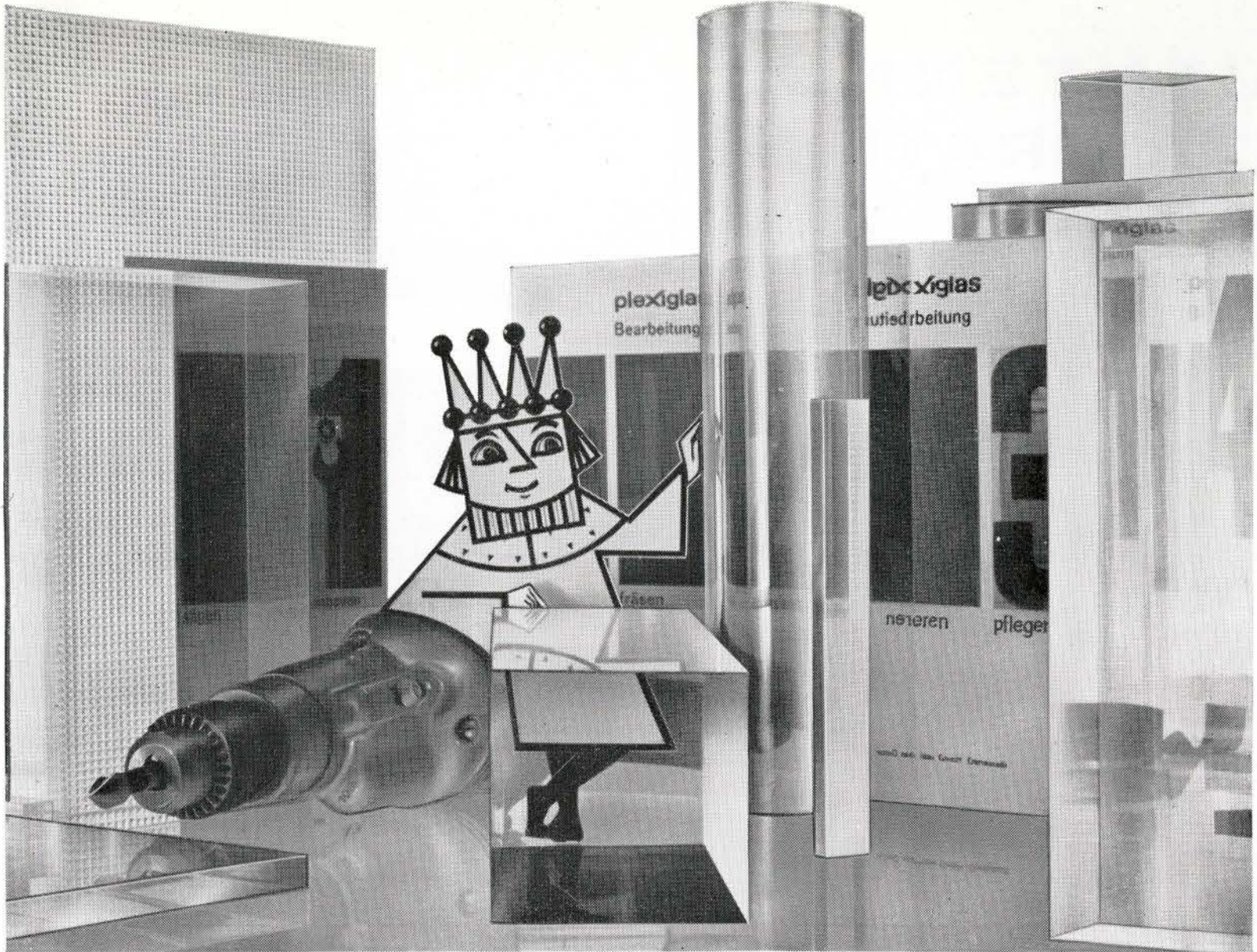
One could criticize some small elements — perhaps the figurative elements are not as fluent as the non-figurative design — but the two blend quite successfully, which is no mean feat, and the overall general effect is successful. The team is a good one and with further collaboration should mature.

*Top: Wall hangings by Mrs Lindgren. Right: Sun Goddess, from the collection of J. Andrews; left: Crusader, from the collection of A. J. Diamond.*

*Below: An adventure in art and architectural integration. Sarco Co.*







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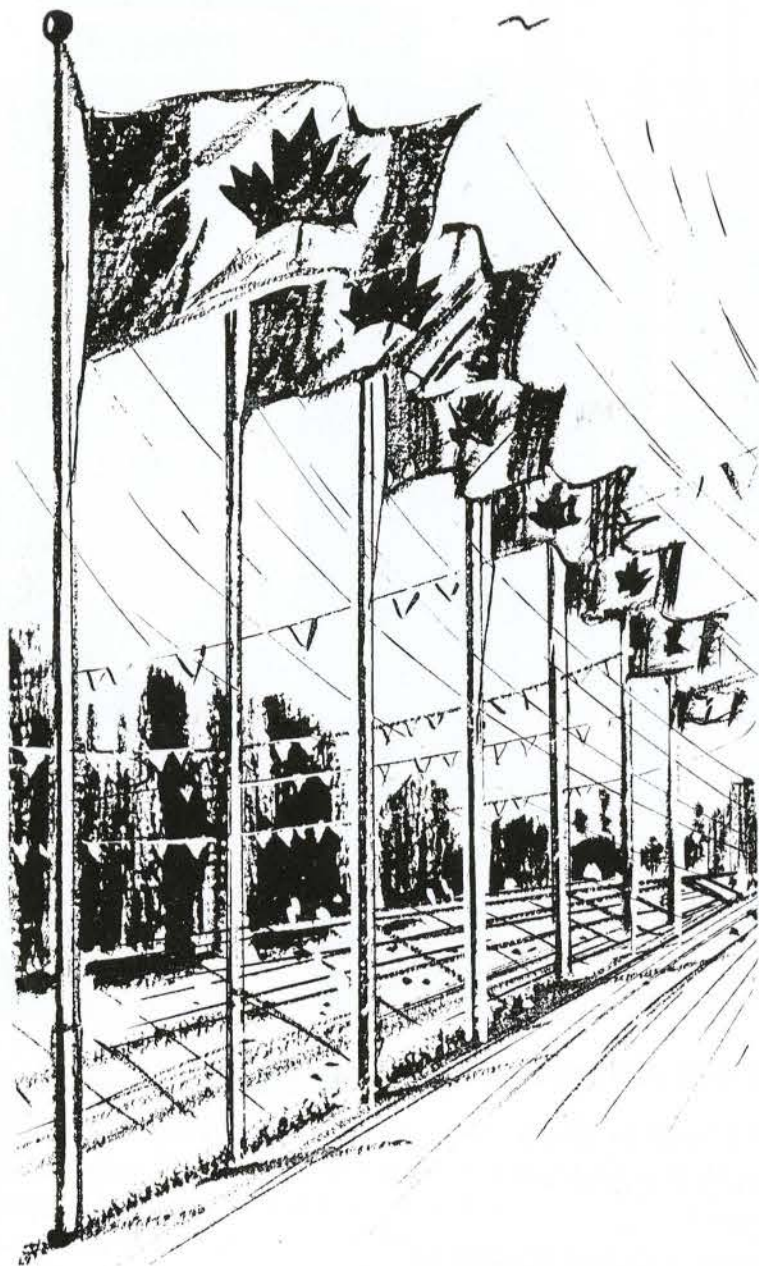
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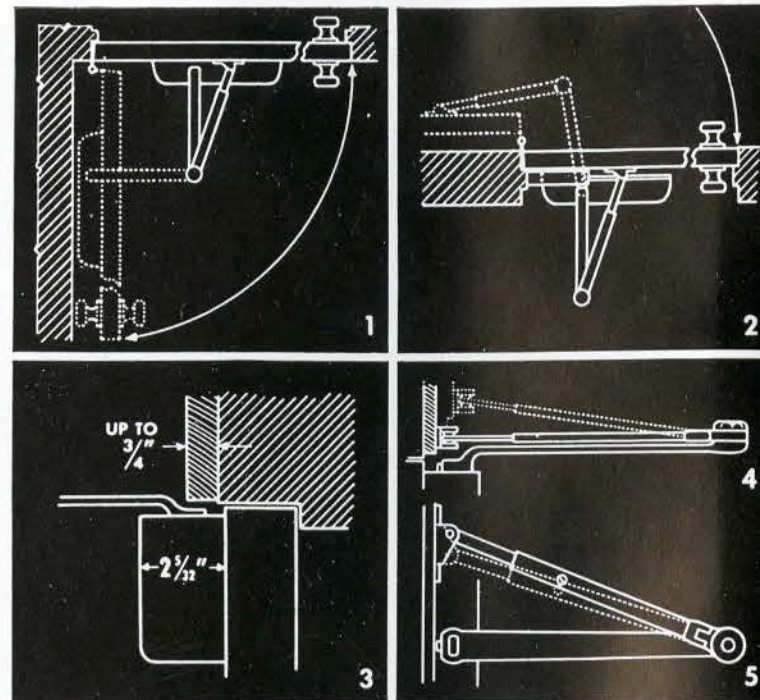
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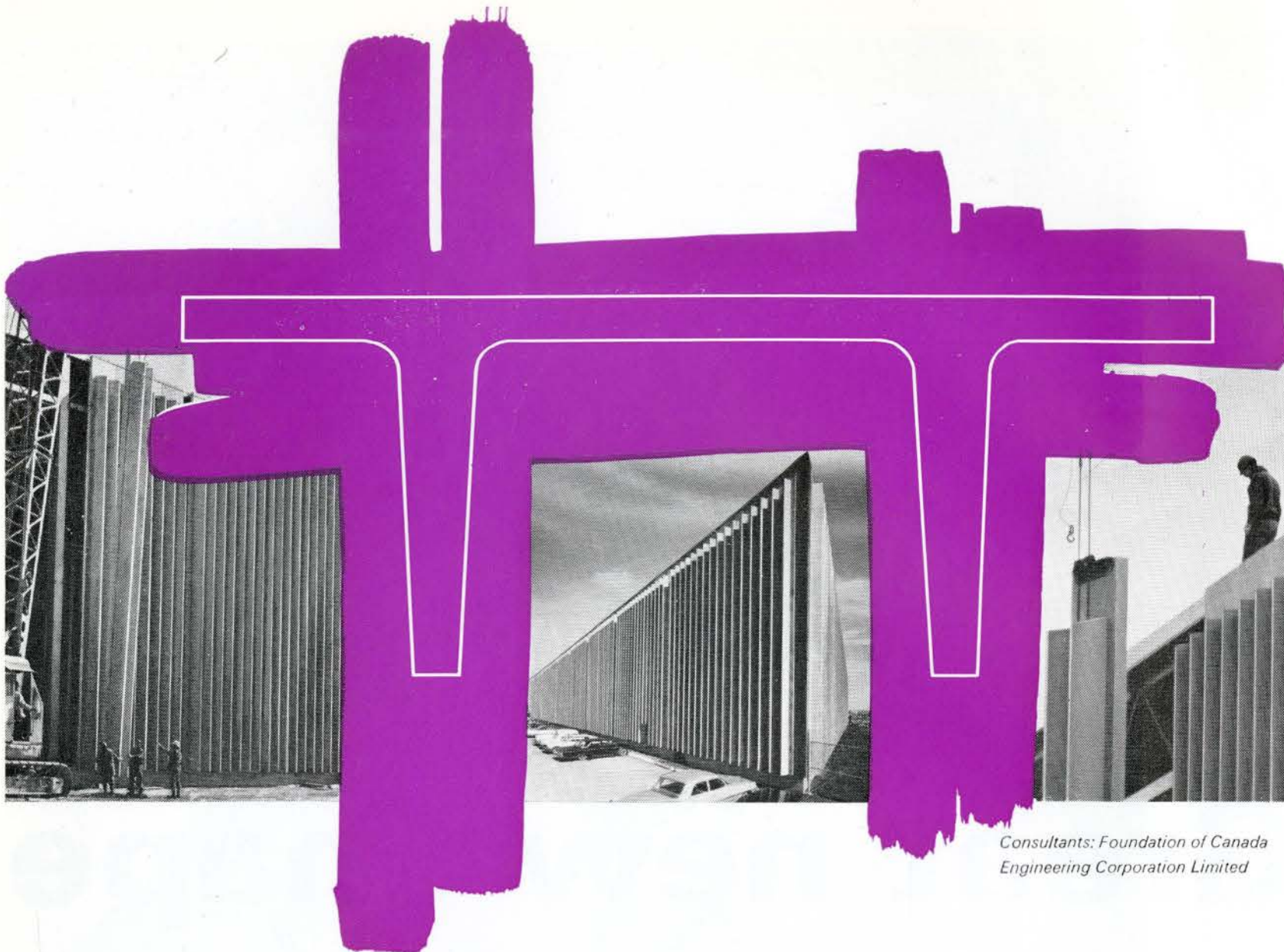
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# Fernand Magnan

## University of Montreal

### *First Prize*

The subject chosen for this project was considered of great interest and indicative of a student just as much concerned with the importance of what to do as of how to do it. This educational center represents a careful and sincere attempt at interpreting in architectural terms the new educational ideas contained in the report of the Royal Commission of Inquiry on Education in the Province of Quebec. Despite the complexity of the subject, the proposed organization indicates a thoroughly competent analysis and offers a synthesis that will be valuable to planners and architects working in this field.

The architectural treatment was considered somewhat crude by the Jury, but the clarity of the concept, the pleasing scale of individual elements in a project of such magnitude and the cheerfulness of a solution that breaks away from the rigid and institutional character of most schools were highly praised.

The Jury recognized that although the hexagonal classroom is not new, the ingenuity with which the total complex is developed around it was to be commended. Further study of the project could permit a tighter grouping and shorter communication lines between the main sections, and development of the central area should give more emphasis to the core of the "site".

The Jury felt that this student shows a deep interest in one of the most pressing problems of modern architectural endeavor and that he deserves help to enable him to continue research in the field of school architecture.

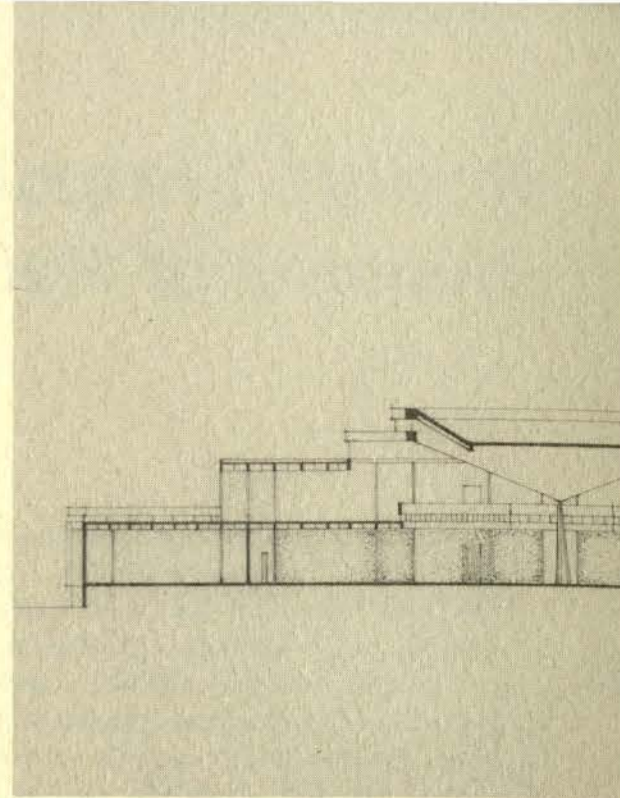
### *Premier Prix*

Le sujet de cette thèse est de grande actualité et témoigne chez l'étudiant de beaucoup de discernement dans le choix du sujet aussi bien que dans la manière de le développer. Cette "Cité éducationnelle" représente un essai consciencieux et sincère d'interprétation en termes architecturaux des idées nouvelles contenues dans le rapport de la Commission Royale d'Enquête sur l'Enseignement dans la Province de Québec. En dépit de la complexité du sujet, l'organisation proposée indique une analyse compétente du problème et offre une synthèse valable qui sera précieuse pour les planificateurs et les architectes intéressés à l'architecture scolaire.

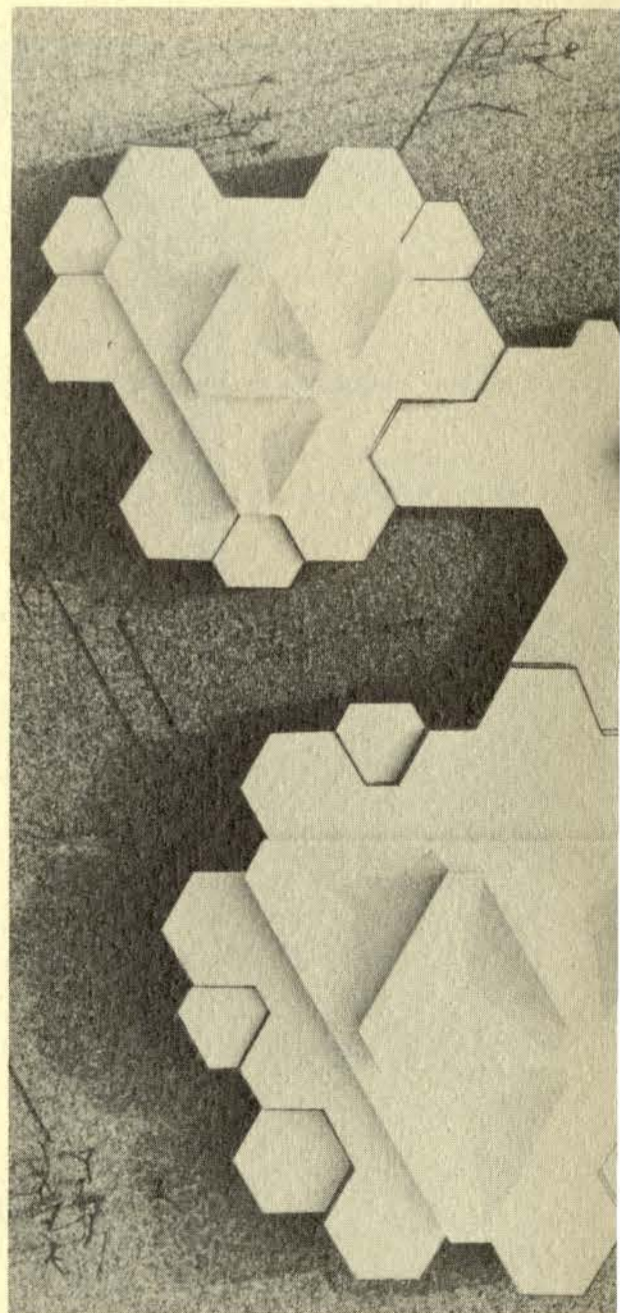
Le jury considère que le traitement architectural du projet laisse quelque peu à désirer mais la clarté du concept, l'échelle réduite des éléments individuels dans un ensemble d'une telle ampleur, et la "gaieté" d'une solution qui n'a rien du caractère rigide et institutionnel de la plupart des écoles méritent beaucoup d'éloges.

Le jury reconnaît que la classe hexagonale ne constitue pas en soi une proposition nouvelle, mais l'ingéniosité du complexe total qui s'en inspire est à souligner. Une étude plus poussée du sujet permettrait un groupement plus serré et des circulations plus directes entre les secteurs principaux, et le développement de la partie centrale devrait donner plus d'accentuation au coeur de la cité.

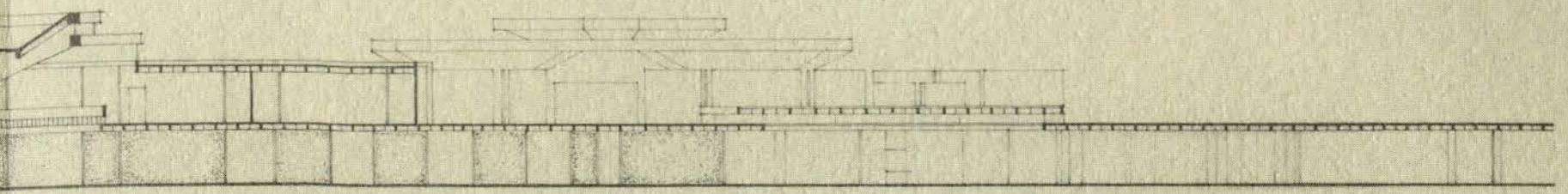
Le jury croit que cet étudiant démontre un profond intérêt pour un des problèmes les plus pressants de l'architecture contemporaine et qu'il mérite d'être aidé pour poursuivre l'étude de l'architecture scolaire dans le monde.



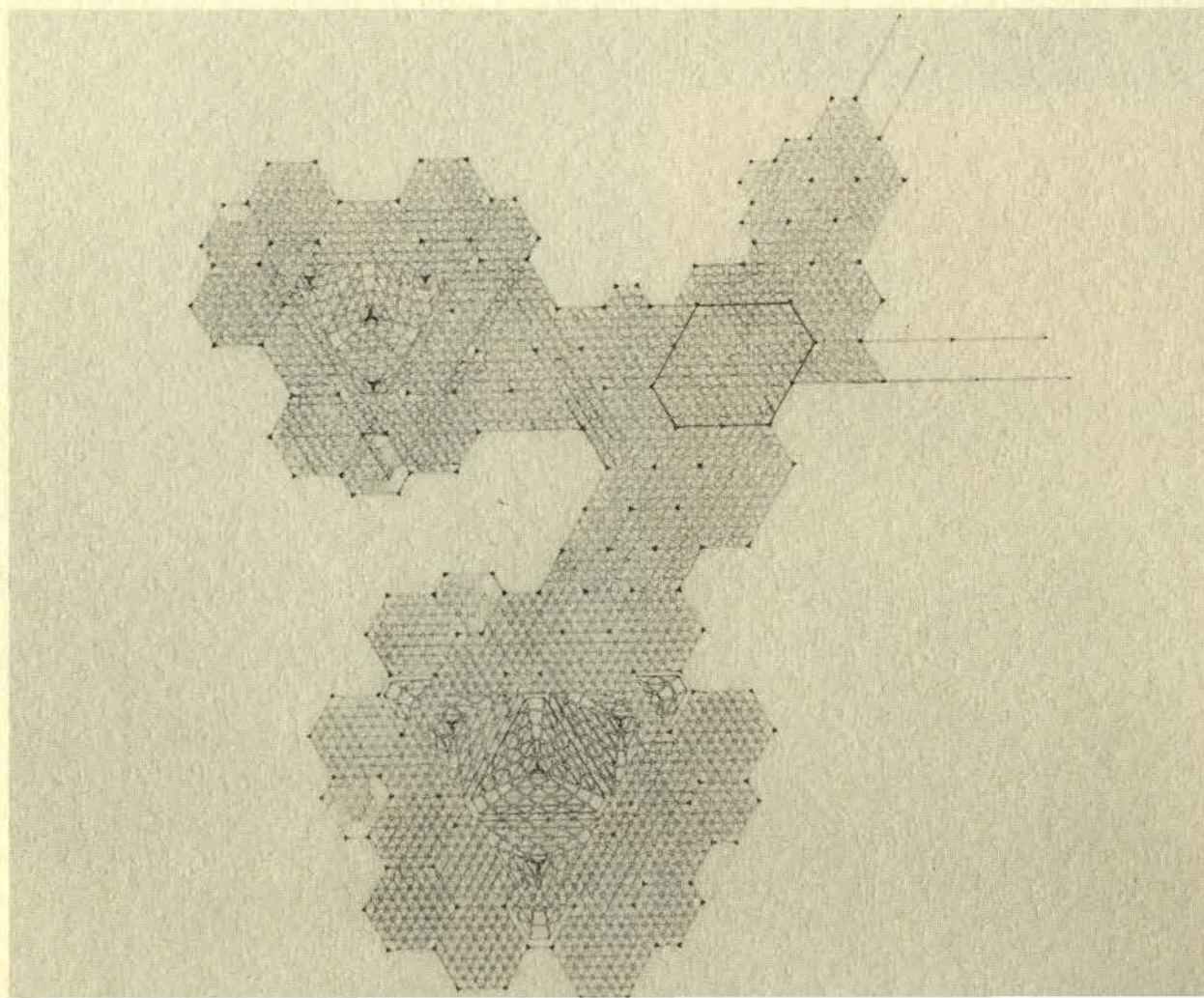
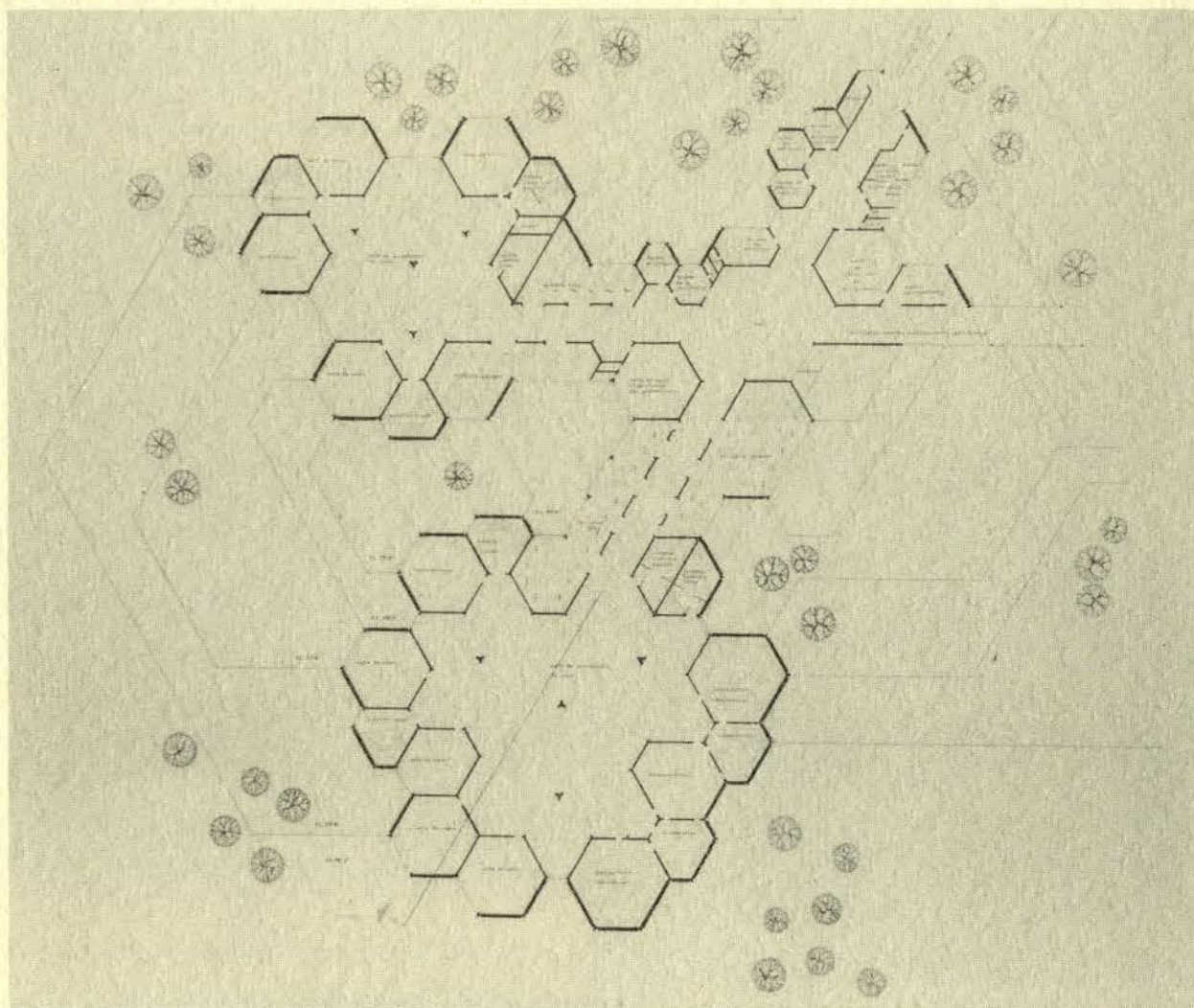
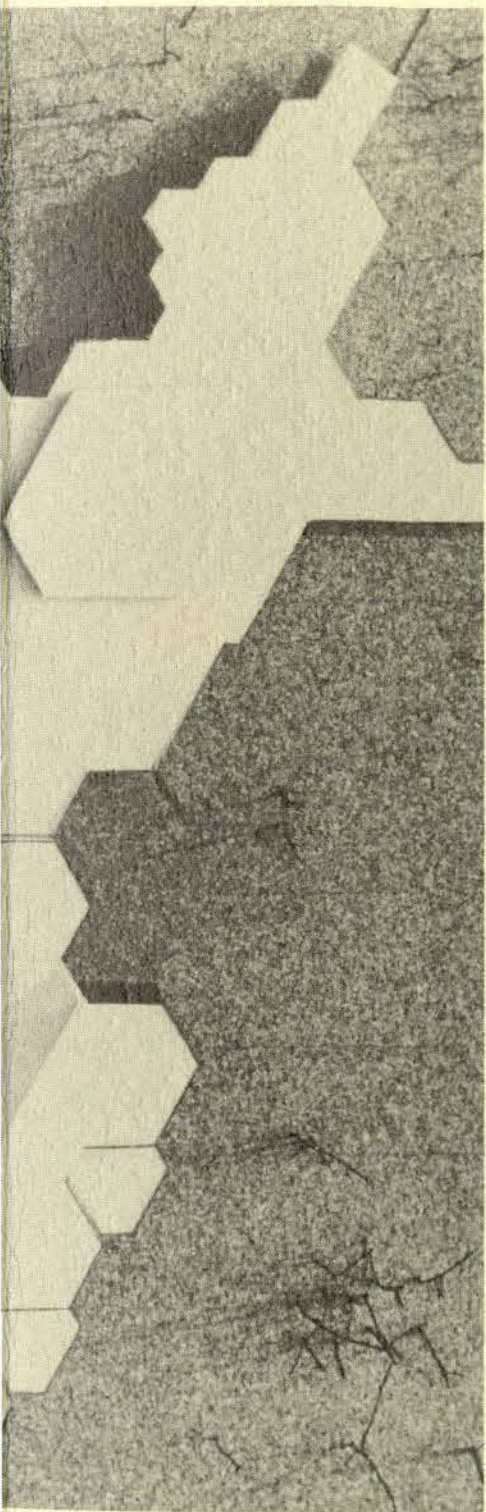
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# Pilkington Scholarship - 1965

## *General Comments*

For the first time in the history of the Pilkington Scholarship, seven schools of architecture had sent in entries and the Jury was faced with the difficult task of selecting from thirteen projects, all presented in very elaborate form. The Jury wishes to congratulate the entrants and the schools on the high standard of their submissions, mentioning particularly the schools of Halifax and Quebec City which, in this first year of participation, sent projects that rank with the best.

The Jury noted that the students gave more attention to programming and organization of spaces and volumes than they have done before, and that the formalism of recent years had been replaced by more personal concepts. The Schools of Architecture are to be congratulated for encouraging this approach, which will be reflected, in the coming years, in an architecture better adapted to the special problems and environment of our country.

The Jury set themselves the task of assessing the potential of the students from the work submitted, rather than choosing a winning project on its merits. It was felt that the scholarship should help a young architect who shows an interest in research to further his knowledge by travelling abroad and investigating the field of his choice. Consequently, over and above the usual criteria of design and technological abilities, the choice of the subject and its analytical development were given high credit. After a detailed study of the projects, the Jury selected three as indicating the students with the stronger personality and the most interest in all fields of architectural endeavor. The order in which these projects were to be placed was more difficult to decide, and a unanimous decision was reached only after lengthy discussion. The Jury congratulates the three winners, and, on behalf of the profession, thanks Pilkington Glass Limited for their continued interest and contribution to the education of architects in Canada, as shown in the sponsoring of this scholarship and these awards.

Members of the Jury were: R. W. Anderson, representing the University of Toronto; Harry Mayerovitch (*F*), for McGill University; Guy Legault, for the University of Montreal; M. P. Mitchener, for the University of Manitoba; V. Prus, for the University of BC. The representatives of Halifax and Laval could not attend and were excused. The professional advisor for Pilkington Glass Limited, who did not have any voting power, as stated in the rules, was Jean-Louis Lalonde, Montreal.

Pour la première fois dans l'histoire du "Pilkington" sept écoles d'architecture étaient représentées. Les membres du jury devaient analyser treize projets comprenant chacun une quinzaine de dessins. Le jury veut féliciter les participants et les Ecoles d'Architecture pour l'excellence de leurs soumissions, avec une mention particulière aux Ecoles d'Halifax et de Québec qui, en cette première année de participation, ont présenté des projets de haute qualité. Le jury a noté avec intérêt que les étudiants semblent accorder plus d'attention à la programmation et à l'organisation des espaces et des volumes qu'ils ne le faisaient dans le passé et que le formalisme des années récentes a fait place à des concepts plus personnels. Les Ecoles d'architecture doivent être félicitées pour cette orientation de l'enseignement dans une direction qui résultera, dans les prochaines années, en une architecture mieux adaptée aux problèmes spéciaux et aux conditions particulières de notre pays.

Le jury, plutôt que de choisir un projet pour ses qualités propres, a cherché à déterminer sur la base des documents soumis, le potentiel de chacun des concurrents. Il a été convenu que la bourse devait aider un jeune architecte qui démontre un intérêt particulier pour la recherche à approfondir ses connaissances en voyageant à l'étranger et en étudiant plus profondément le sujet qu'il a choisi. Aussi, en plus des critères usuels de composition architecturale et de connaissances techniques, le jury a attaché une grande importance au choix du sujet et à son développement analytique.

Après une étude détaillée des projets, le jury a retenu les trois soumissions qui, de l'avis des membres, indiquaient des étudiants possédant une forte personnalité et un intérêt marqué pour tous les aspects du domaine architectural. L'ordre dans lequel ces projets devaient être placés s'avéra plus difficile à déterminer et ce n'est qu'après de longues discussions que les membres du jury arrivèrent à une décision unanime.

Le jury désire féliciter les trois gagnants et, au nom de tous les architectes, veut remercier "Pilkington Glass Ltd." pour l'importante contribution à l'éducation des architectes au Canada que constitue la bourse de voyage et les prix que le compagnie offre depuis plusieurs années. Les membres du jury étaient: R. W. Anderson, représentant l'Université de Toronto; R. G. Legault, pour l'Université de Montréal; Harry Mayerovitch (*F*), pour l'Université McGill; M. P. Mitchener, pour l'Université du Manitoba; V. Prus, pour l'Université de la Colombie Britannique. Les représentants d'Halifax et de Laval ne purent se présenter et furent excusés. Jean-Louis Lalonde agissait comme conseiller professionnel pour "Pilkington Glass Ltd.", et n'avait pas droit de vote, tel que le veulent les règlements.



# Frank Cresswell Carter

## University of Toronto

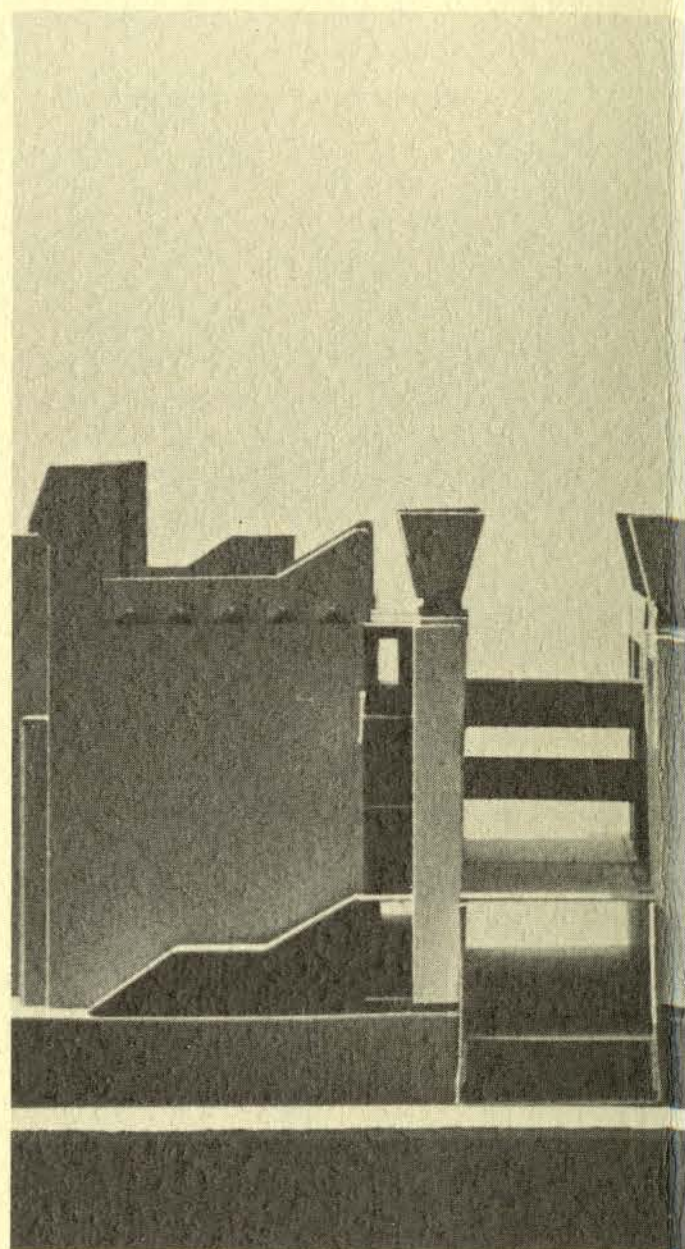
### *Second Prize*

This student is to be congratulated for the choice of a subject that is of current concern to all planners and architects in our cities where educational facilities will have to be greatly increased in the next few years. The proposed solution of a campus in an urban environment with a high density development, but still preserving a large amount of open space, indicates a very intelligent and mature approach. The complex as a whole is very well planned, with the main sections clearly defined. The Jury commented that actual development of the scheme on a more definite program would result in a larger variety of the different volumes and spaces which would add interest to the whole. The laboratory building studied in detail shows the same competence in planning, plus a great sensitivity in the architectural treatment and the volumetric expression. The presentation is very comprehensive, but the quality of the draftsmanship is not quite on par with the brilliant choice and handling of the subject.

## "Undergraduate Teaching Laboratories for the Sciences"

### *Deuxième Prix*

Cet étudiant doit être félicité pour son choix d'un sujet d'intérêt courant pour les urbanistes et les architectes dans nos villes où les aménagements éducationnels devront être multipliés dans les prochaines années. La solution proposée d'un campus dans un milieu urbain, avec développement à haute densité, mais préservant de grands espaces libres indique un esprit lucide et mûr. L'ensemble du campus est très bien conçu, avec ses secteurs principaux clairement définis. Le jury a noté que le développement du schéma, avec un programme plus élaboré, permettrait une plus grande diversité des différents volumes et espaces, ce qui ajouterait un intérêt certain à l'ensemble. Le projet de laboratoire étudié en détails démontre chez ce concurrent un sens très sûr de la planification et une sensibilité remarquable dans le traitement architectural et l'expression volumétrique. La présentation est très élaborée, mais sa qualité graphique ne rend pas justice au sujet ni à son développement.





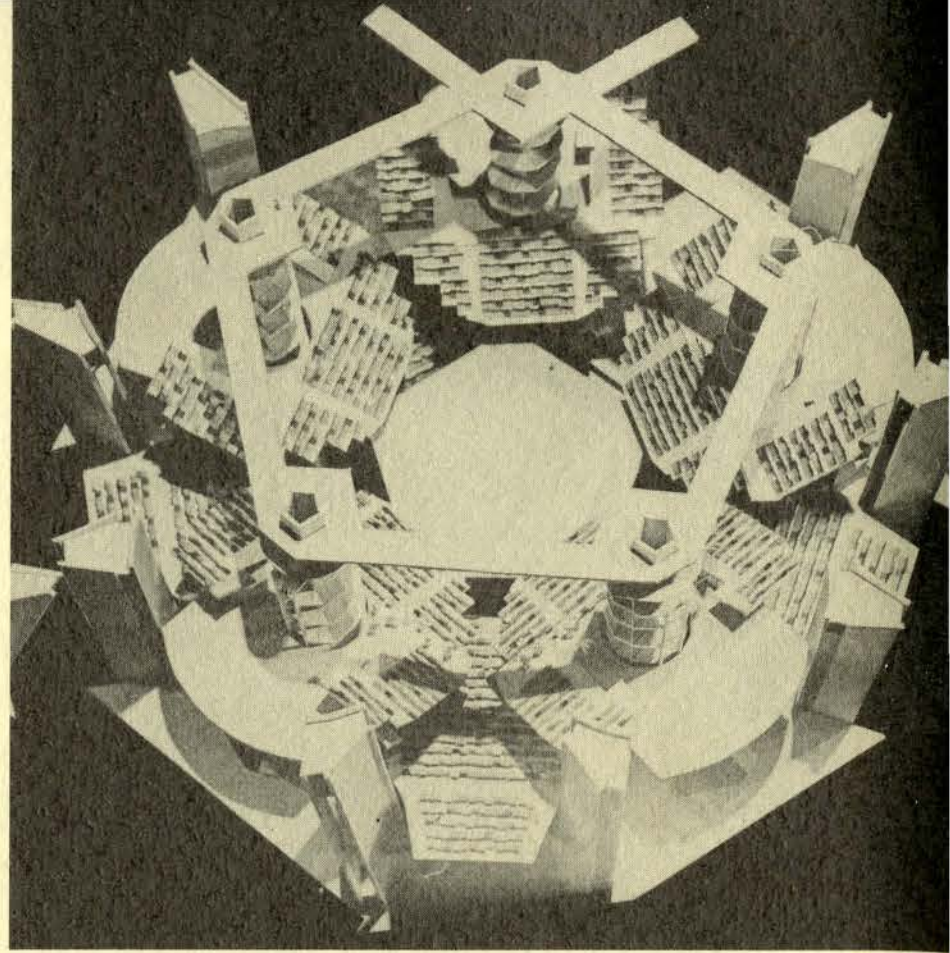




# Robert Simpson Frew University of Manitoba

## *Third Prize*

The subject of this thesis is also very timely, when almost every city in Canada is dreaming of such a centre. The Jury felt, though, that this student had set an insoluble problem for himself, in that the complexity of the requirements for the various types of performances precluded a satisfactory solution within one space. But the sculptural quality of the proposed building, together with the evident capacity to visualize complex spaces, and the thoroughly competent presentation, showed a highly talented young architect with a bright future. This project, with a few others, brought the comment from the Jury that our Schools of Architecture have nothing to envy in their equivalent in other countries.



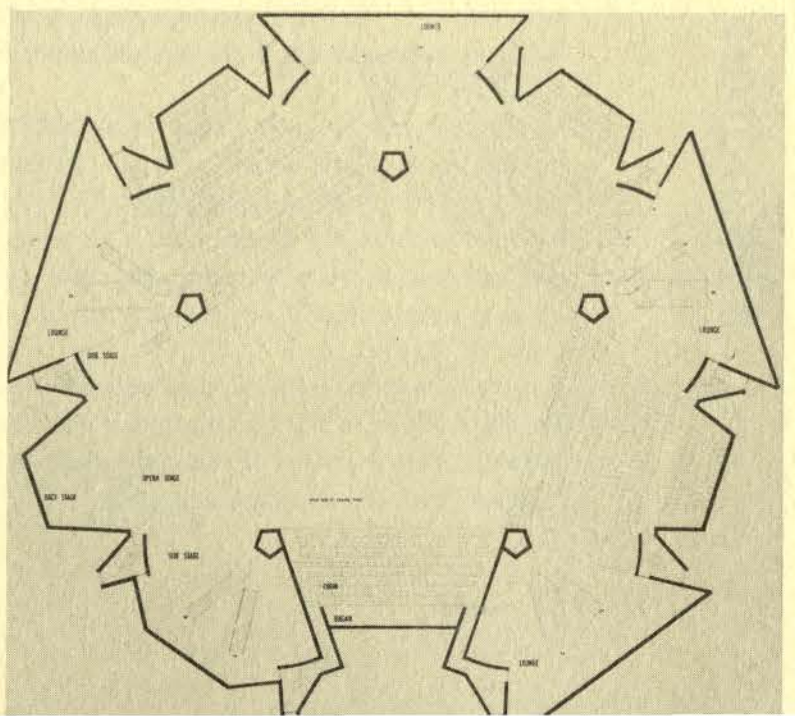
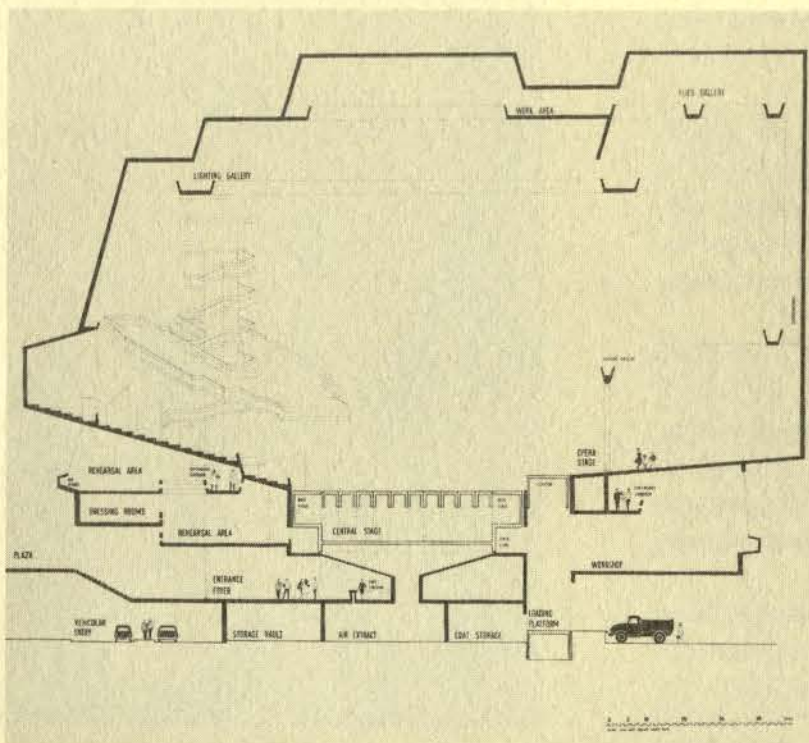
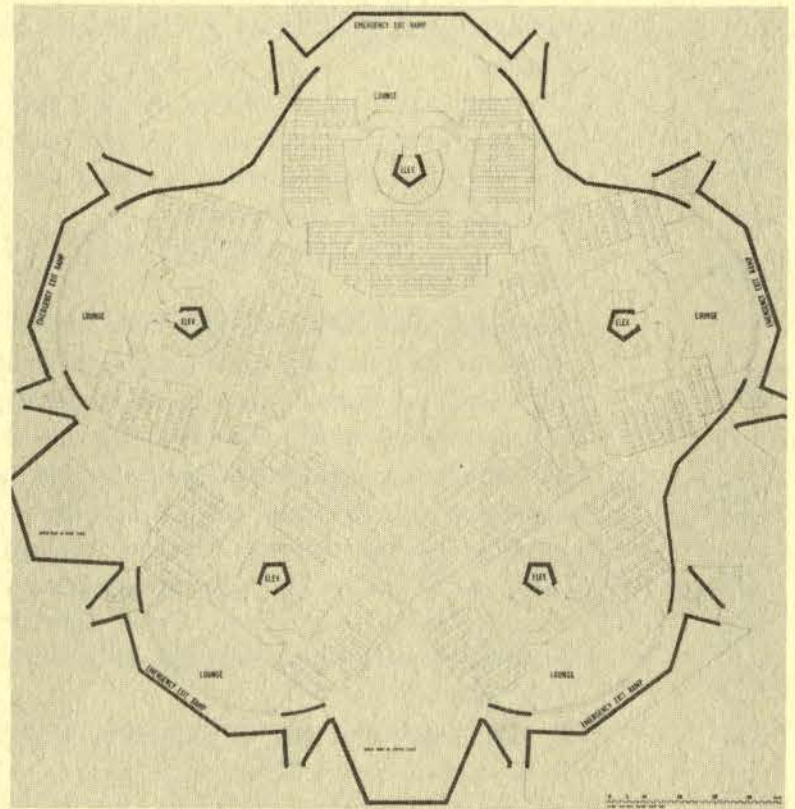
## "A Performing Arts Center for a population of 500,000"

## *Troisième Prix*

Le sujet de cette thèse est aussi de grande actualité à un moment où presque chaque ville au Canada rêve d'un tel centre. Le jury croit cependant que cet étudiant s'est attaqué à un problème presque insoluble et que la complexité des besoins pour les divers genres de spectacles ne permet pas une solution satisfaisante à l'intérieur d'un espace unique.

Mais la qualité sculpturale du projet ainsi que l'habileté évidente de son auteur pour visualiser des espaces complexes et les présenter d'une manière extrêmement compétente démontrent un jeune architecte de grand talent à qui un brillant avenir est ouvert.

Ce projet, avec quelques autres, fit remarquer au jury que nos Ecoles d'Architecture n'ont rien à envier à celles d'aucun autre pays.



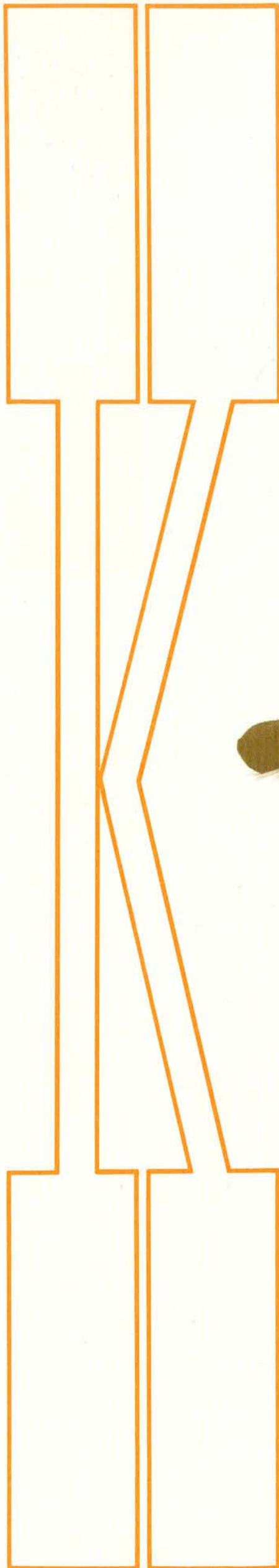


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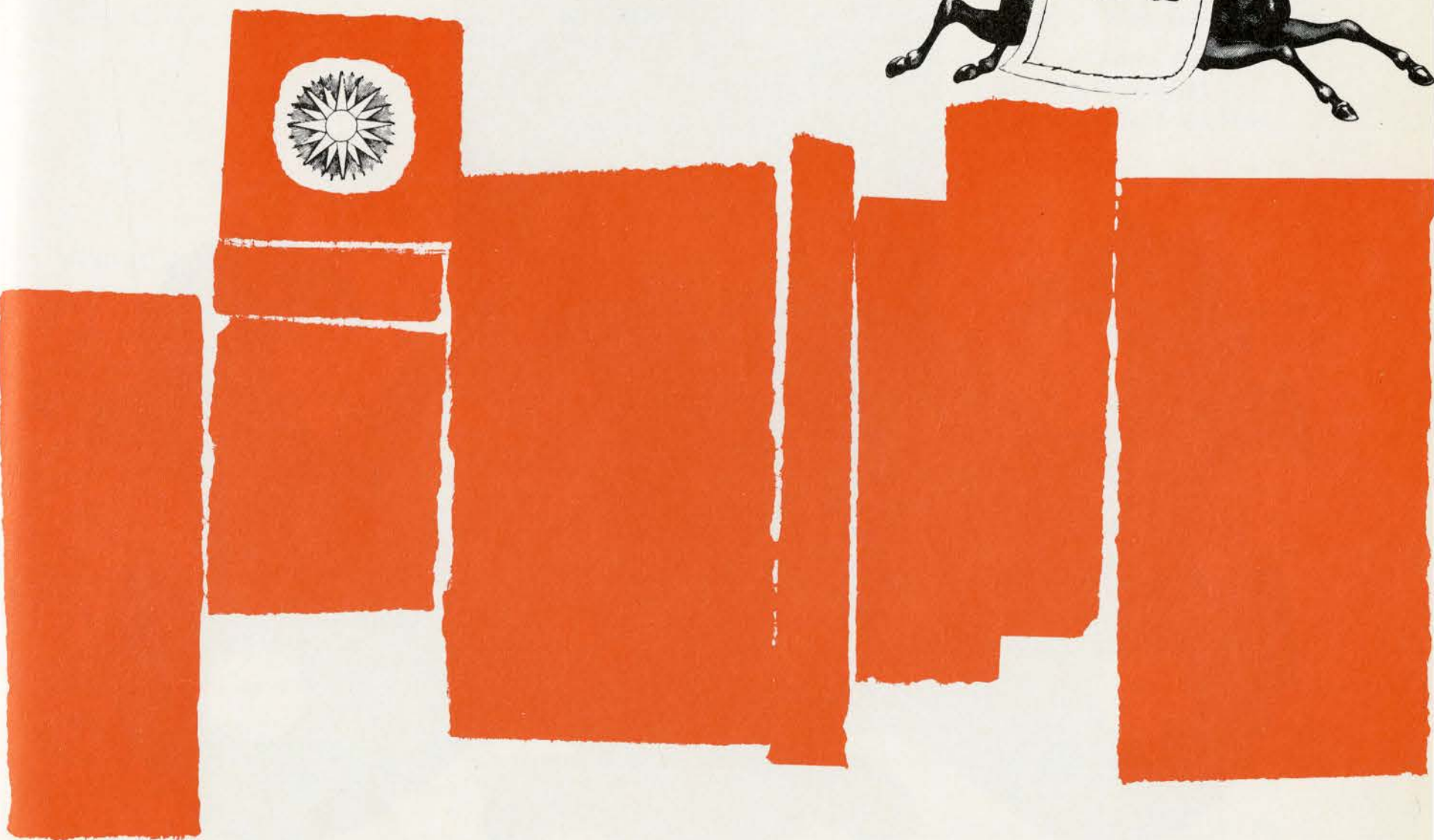
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## Foreword

To assist all community leaders in Canada who contemplate some form of street decoration for our Centennial year, 1967, this manual is presented as a Centennial project by the Royal Architectural Institute of Canada. Copies in both French and English are published by the Journal of the Institute and are distributed free of charge to the municipalities of this country.

It is hoped that our cities and towns will enliven their streets, parks and buildings with colourful and significant decorations worthy of this great occasion.

The authors have been involved in street decorations in Vancouver each year since 1958. The success of these undertakings, resulting from close collaboration between architects, engineers and fabricators, has convinced us that a manual based on sound experience would be of considerable value at this time.

The Institute extends sincere thanks to W. G. Leithead, B.Arch., F.R.A.I.C., the author of this booklet. We are also indebted to R. J. Thom, M.R.A.I.C., and Rudy Kovach, Artist, for their assistance in compiling the contents, and to Paul O. Trepanier, A.D.B.A., M.R.A.I.C., for the French translation.

May I on behalf of the Institute express our fervent hope that this manual will both stimulate and assist all those involved in street decorations and that their efforts will result in great visual joy for Canadians from coast to coast.

F. Bruce Brown, LL.D., M.Arch., F.R.A.I.C.,  
A.R.I.B.A., immediate Past President,  
The Royal Architectural Institute of Canada.

## Avant-propos

L'Institut royal d'architecture du Canada, désireux d'aider les dirigeants des divers centres canadiens qui projettent de décorer de quelque façon leurs rues à l'occasion de l'année du Centenaire, 1967, est heureux de présenter le présent manuel comme projet du Centenaire. Ce manuel sera reproduit en anglais et en français dans le Journal de l'Institut et des exemplaires en seront envoyés gratuitement aux municipalités du Canada.

Nous espérons que nos villes et villages tiendront à égayer leurs rues, leurs parcs et leurs bâtiments au moyen de belles décorations, dignes d'une aussi grande occasion.

Les auteurs ont été chargés de décorations de rues à Vancouver tous les ans depuis 1958. Les succès qu'ils ont remportés, fruit d'une étroite collaboration entre architectes, ingénieurs et fabricants, nous ont convaincus que la présentation d'un manuel fondé sur une expérience pratique pourrait être très précieuse à l'heure actuelle.

L'Institut tient à remercier chaleureusement M. W. G. Leithead, B.Arch., A.I.R.A.C., qui a été l'inspirateur de cette brochure. Nous exprimons aussi notre appréciation à MM. R. J. Thom, M.I.R.A.C., et Rudy Kovach, artiste, qui ont aidé à recueillir la matière, ainsi qu'à M. Paul-O. Trépanier, A.D.B.A., M.I.R.A.C., qui s'est chargé de version française.

Au nom de l'Institut, j'exprime le ferme espoir que le présent manuel stimulera et aidera tous ceux qui seront chargés de décorations de rues et que, grâce aux efforts de ces personnes, nos villes présenteront un spectacle plus agréable aux yeux des Canadiens d'un littoral à l'autre du pays.

F. Bruce Brown, LL.D., M.Arch., A.I.R.A.C.,  
A.R.I.B.A., président sortant de  
l'Institut royal d'architecture du Canada.



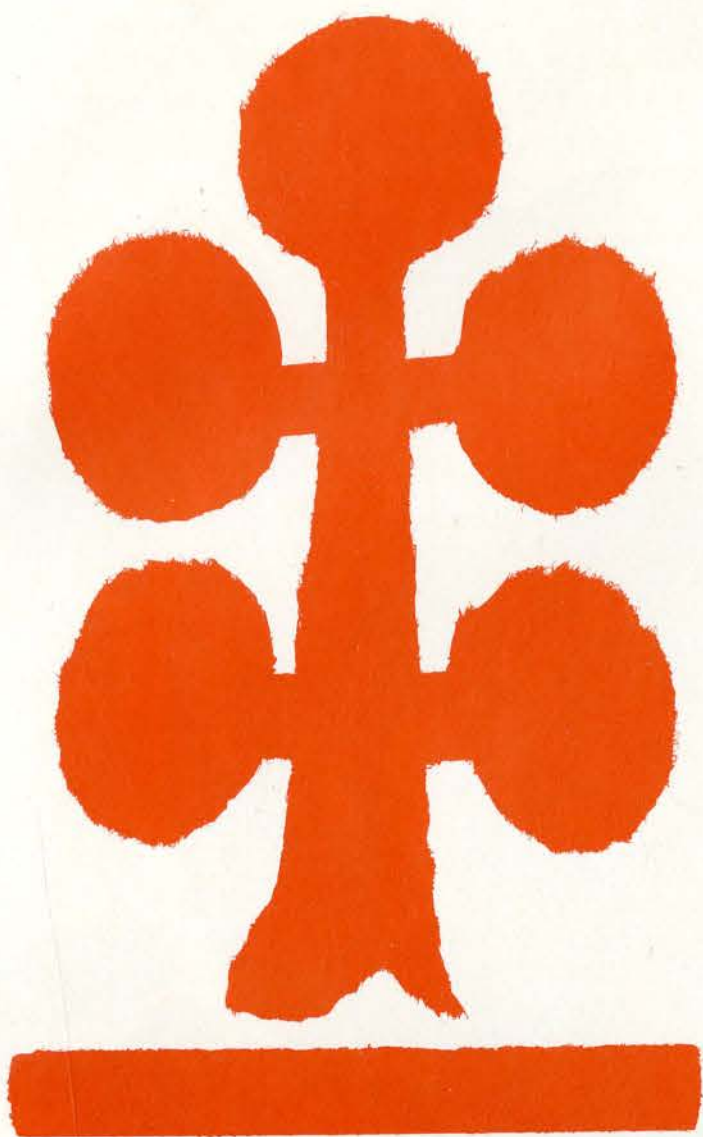
## Introduction

Before any decoration scheme is commenced, those responsible for its design must reassure themselves that they know their community intimately. The knowledge required is that which indicates a deep understanding of all facets of the community. This understanding must embrace the physical, historical and sociological character, past, present and future. The historical knowledge should be comprised of an understanding of prominent and well-known events and little-known but interesting aspects of the past. Physical knowledge should concern itself with the natural environment and the resources which were important to the settlement of the area. This preliminary study will indicate to the design team the major influences which have shaped their community and which have given to it a unique character. With this background of information, the designers will then be equipped to determine the major theme for the decor.

Decorations on city streets will be a very dominating visual element. It therefore follows that their design should be of extremely high calibre. The decorations will provide a unique opportunity for skilled professionals to exhibit their talents. The design group could include Architects, Painters, Commercial Artists, Display Artists, and will need the technical assistance of the City Engineer, the City Electrician, the local Transit and Power Authority, among others. The group will require the support of the City Council, the local Architectural Chapter, the Art School, and Community Arts Council if such exists. It will probably be necessary for many of the group to donate their time and effort, although it is desirable that the actual design be produced by professionals paid to do their work.







## Introduction

Avant l'amorce de quelque projet de décoration, les responsables de la conception doivent s'assurer qu'ils connaissent intimement leur municipalité. Cette connaissance acquise est celle qui se nourrit de la compréhension profonde de tous les aspects de la vie communale, laquelle embrasse les caractères physique, sociologique, présents, passés et futurs, sans négliger l'aspect historique. Ce dernier doit mettre en valeur des événements bien connus de même que d'autres qui même s'ils sont plus ignorés n'en présentent pas moins d'intéressantes caractéristiques du passé. La connaissance physique doit s'attacher à l'environnement naturel et aux ressources qui ont contribué de façon appréciable au développement de la région. Cette étude préliminaire indiquera aux responsables de la conception les principales influences qui ont servi de cadre à la municipalité et qui finalement lui ont donné son caractère propre. S'appuyant sur ces données, il sera alors possible de déterminer le thème principal du décor.

Les décorations des rues de la ville constitueront un des éléments visuels prédominants. Il s'ensuit la nécessité que le concept décoratif ait une grande valeur intrinsèque. La matérialisation de cette idée spécifique fournira aux artistes les plus doués (professionnels) une occasion unique de faire valoir leurs talents. Le groupe chargé de la conception du projet pourrait être formé d'architectes, de peintres, d'artistes commerciaux, d'étalagistes et devrait pouvoir compter sur le concours technique des ingénieurs et des électriciens de la ville, de même que sur celui des autorités des compagnies distributrices d'électricité pour ne nommer que ceux-là. Ce groupe devra également avoir l'appui du conseil de ville, de l'association locale des architectes, de l'école d'arts, du conseil des arts, lorsque de tels organismes existent. Eventuellement plusieurs membres de ce groupe devront consentir à travailler bénévolement, même s'il est préférable que tout le travail de préparation soit confié à des professionnels rémunérés.







## Forming a Decorations Committee

It is desirable that the design work for decorations be commenced at least 18 months prior to their installation. The decorations committee probably should be a sub-committee of the main centenary committee with its chairman being a fully participating member. The task of the group will be to determine the décor, specify materials and to design the methods of construction. Another important function will be that of estimating costs of art, materials, fabrication, erection, maintenance and dismantling. In view of these requirements and a knowledge of environment as discussed previously, the type of professional best suited for the position of chairman is an architect. This person should have experience in committee work and in coordinating the efforts and talents of the diversified professionals in the group.

As a sub-committee the decorations group must be fully aware of the overall plan for celebrations, their timing, location and duration. As the decorations will be a major expenditure the chairman should participate in budget discussions and assist those responsible by preparing and explaining cost estimates.

## Comité de décorations : formation

Il est bon que la préparation des plans pour les décorations débute au moins dix-huit mois avant la date prévue pour leur montage. Le Comité de décorations sera sans doute un sous-comité du Comité du centenaire principal, dont le président sera un membre à participation entière de ce dernier. La tâche de ce comité consistera à arrêter la nature du décor, à spécifier le genre de matériaux de même qu'à déterminer les méthodes de construction. Une autre de ses importantes responsabilités sera de préparer un estimé du coût du travail d'art, de même que ceux des matériaux, de la fabrication, de la construction, de l'entretien et du démantèlement. En raison des exigences précitées et de la nécessité de la connaissance de l'environnement telle qu'exposée préalablement, un architecte est le genre de professionnel le plus apte à occuper la présidence de ce comité. Celui-ci devra avoir l'habitude du travail en comité de même qu'il devra être apte à coordonner les efforts et les talents des professions diversifiées qui se retrouveront à l'intérieur de ce groupe. En tant que sous-comité de l'organisme principal, le groupe responsable de la conception des décorations doit avoir une idée précise du programme des célébrations, cédule, site et durée. Les décorations entraîneront des déboursés importants, partant, le président du comité devrait prendre part aux discussions sur le budget consacré aux célébrations et aussi seconder les responsables de sa préparation en mettant à leur disposition les divers estimés mentionnés antérieurement et en fournissant les explications pertinentes.







## The Committee at Work

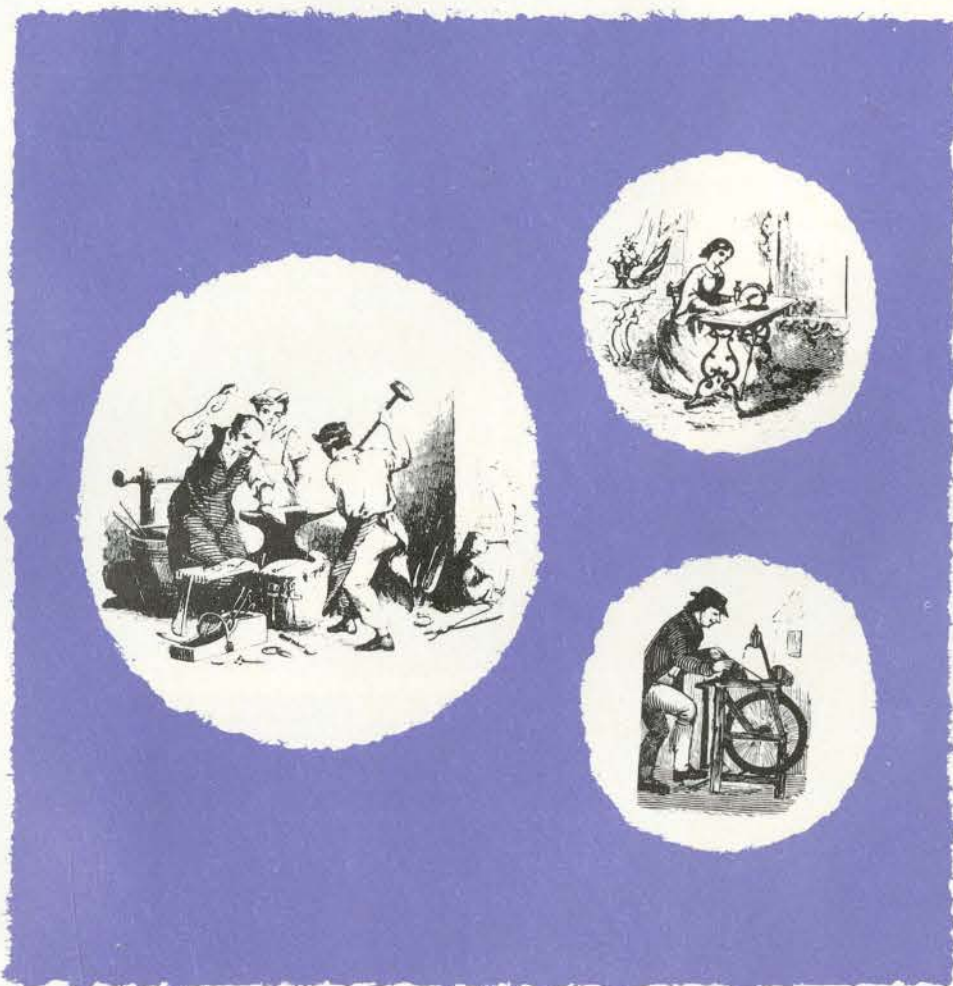
In the initial stages the main work of the committee will fall upon the artists in the group. The role of the artist will be to translate the theme into visual sketches of such a nature that they will enable the main committee to appreciate the final effect and extent of the scheme. The artists must be assisted by others during this design phase in order that they can appreciate the technical or restrictive requirements which must constantly be kept in mind. The size and scope of the decorations scheme must be determined at the earliest possible date. The scheme should radiate outwards from a central area of major significance, the city centre, the city hall or civic square. This area of major impact should be connected by street décor to other important focal points then gradually diminish as streets approach parks, waterfronts, residential areas or other natural culminations.

There will be pressure on the committee from all segments of the community to decorate the entire city. In the interests of budget and the impact of décor this pressure must be resisted. The highest priority should be given to those locations which will be visited by the greatest proportion of residents and visitors and areas which have historical, present or future significance for the people who live in the community.

One solution which will satisfy some of the desires of neighbourhood groups is to design portable items which can be moved from one place to another as various events occur. In this regard the decorations chairman can influence the main committee in the timing of community events to allow sufficient intervals in which décor can be erected, dismantled, moved and re-erected. The descriptions of various items which follow and their methods of erection will indicate those which lend themselves to inexpensive portability.

All décor should give maximum consideration to colour, movement, delight, and the creation of a festive air. Children must be remembered and some items should be designed specifically to appeal to this most important segment of the community.





## Le comité au travail

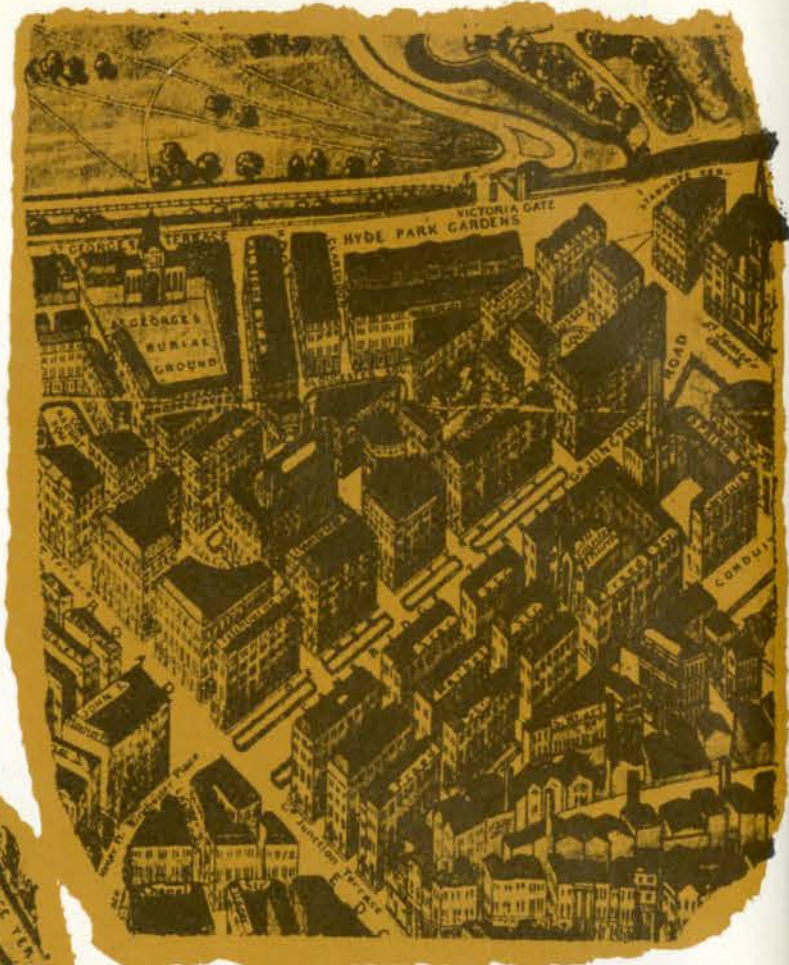
Les artistes du groupe se verront confier la responsabilité de la plus grande partie du travail lorsque le comité chargé de la conception se mettra à l'oeuvre. L'artiste aura pour tâche la transposition du thème en scènes visuelles de nature à faire apprécier par le comité principal les résultats ultimes de même que l'étendue du projet. Afin qu'ils puissent apprécier les exigences techniques ou restrictives pendant le travail de conception, les artistes doivent pouvoir compter sur des collaborateurs; dans un même ordre d'idées, ces exigences doivent être constamment présentes à l'esprit des esthéticiens. L'importance du projet de décorations doit être déterminée dans le plus bref délai possible. Le projet devra rayonner à partir d'un endroit significatif par son seul site, tels le centre névralgique de la ville, l'hôtel de ville, une place publique. Des décorations dans les rues devraient relier ce point d'impact de l'ensemble du projet aux autres endroits importants, s'amenuisant graduellement à l'approche des parcs, quais, sites résidentiels et lorsque les rues se perdent dans le décor de la nature.

Les divers éléments de la population effectueront des pressions sur le comité visant à faire décorer l'ensemble de la ville, mais on devra y résister afin d'éviter que le budget ne soit dépassé et aussi afin de sauvegarder l'impact du décor. Priorité sera donnée aux endroits les plus fréquentés par les citoyens et les visiteurs de même qu'aux sites qui pour les résidents, revêtent une signification historique actuelle ou future.

Dans le but de satisfaire du moins partiellement les désirs des citoyens des divers quartiers de la ville, on peut envisager la solution suivante: la conception d'éléments qui pourront être déplacés et transportés sur les divers sites des manifestations. Pour faciliter l'application de cette solution, le président du Comité de décorations peut attirer l'attention du comité principal sur l'élaboration du calendrier des manifestations dans le but de prévoir des intervalles suffisants pour permettre l'installation du décor, le démontage, le transport et la réinstallation. La description des divers éléments décoratifs, indiquera ceux qui pourront être déplacés à peu de frais.

On doit donner toute la considération possible à la couleur, au mouvement, au coup d'oeil d'ensemble dans tout motif de décoration, le but étant de créer une ambiance de festivité. L'on doit aussi envisager la création d'éléments spécifiquement destinés aux enfants, ces derniers constituant une large tranche de la population.







## Developing the Master Plan

The committee should supply itself with a large-scale map of the community. This map should have marked upon it all major open areas, structures, monuments and key intersections. All lamp poles, power poles, telephone poles and obstructions should be plotted. All bridges, overpasses and underpasses should be carefully studied. The designers should study and photograph streets to determine their character before commencing any design. It will become obvious through such study that some streets are primarily of pedestrian importance, others will have most significance to motorists. These conclusions will determine the type of décor, the location, the spacing and other design factors. The spaces between buildings will assume importance. Some streets will, through accumulation of advertising signs, be unsuitable for many items of decoration while others will have a sufficiency of natural features such as foliage to indicate that decorations would be superfluous.

The points of entry to the community such as the airport, railroad stations, bridges, etc., will have special importance to visitors and should be decorated with a festive and welcoming intent.

The development of the master plan in an early stage will simplify the production of the budget, it can in conjunction with specifications be used by fabricators, erection and maintenance crews and for the determination of valuable unit costs. After the particular scheme is retired the master plan will be a valuable asset to those responsible for future schemes which it is to be hoped will become a perennial summer feature of many communities.



## Élaboration du plan directeur

Le comité devrait se procurer une carte topographique de la région, une carte à grande échelle autant que faire se peut. Sur cette carte devraient être indiqués les plus grands espaces libres, les structures et les monuments d'importance de même que les principaux carrefours. On y indiquera tous les obstacles : lampadaires, poteaux téléphoniques ou d'électricité. On étudiera avec soin tous les ponts et viaducs. Avant que tout aménagement ne soit entrepris, les esthéticiens devront photographier et analyser les rues afin d'en établir les caractéristiques. Cette étude rendra évident le fait que les piétons empruntent certaines rues tandis que d'autres ne servent pratiquement qu'aux automobilistes. Ces conclusions atteintes, on pourra déterminer le genre de décorations, leur emplacement, leur espacement et les autres facteurs inhérents. Les espaces entre les édifices revêtiront une importance particulière. Certaines rues, en raison de l'accumulation des réclames commerciales seront impropres à recevoir certains éléments décoratifs, tandis que d'autres, suffisamment pourvues de beautés naturelles, tel le feuillage, rendront tout autre décoration superflue.

Les divers accès de la ville, aéroports, gares, ponts, etc. auront une importance particulière aux yeux des visiteurs et partant, doivent être décorés de façon à suggérer une atmosphère gaie et accueillante.

L'élaboration du plan d'ensemble au tout début de l'entreprise simplifiera la préparation du budget. Son usage et celui du devis constituent des outils importants pour les équipes de montage, de construction et d'entretien, et aideront à déterminer le coût des éléments les plus élaborés. Après l'usage d'un décor spécifique, le plan d'ensemble demeurera un atout important pour les responsables des programmes futurs, lesquels, ce qui est à espérer, deviendront dans plusieurs villes, un évènement estival annuel.



## The Artists

These may include painters, muralists and sculptors. They can be chosen from those who are of established stature in the community or from the students at the local school of art. Preferably the established artist should participate in the conception of the theme, he may then wish to continue into actual design or assist students as they perform this function.

Scale models and scaled-down cartoons are necessary at any early stage in order that they may be approved by the committee and assessed with regard to cost and technical considerations of fabrication, erection and maintenance.

If silk screening is involved the artists should cut their own stencils to suit the needs of local fabricators. They must be party to the selection of materials and knowledgeable about the colour range of available inks, paints, fabrics, etc., particularly as this applies to the ability of these items to withstand long exposure to sun, wind and rain.

The artist must be responsible for the colour scheme and the variations and progressions of the scheme. By use of the master plan he should describe graphically this aspect of his work so that it can be used by fabricators and erection crews.

The employment of the artist might terminate at this point or could be continued if his design items are to be varied or moved during the season.

## Les artistes

Le groupe des artistes peut comprendre les peintres et les sculpteurs. Ils peuvent être choisis parmi ceux dont la réputation est faite dans la municipalité ou parmi les étudiants de l'école d'art de la ville. La participation d'un artiste reconnu pour la conception du thème est plus que souhaitable ; cet artiste pourra, par la suite, manifester le désir de poursuivre son travail au stade de la conception véritable, ou encore d'assister les étudiants dans cette tâche.

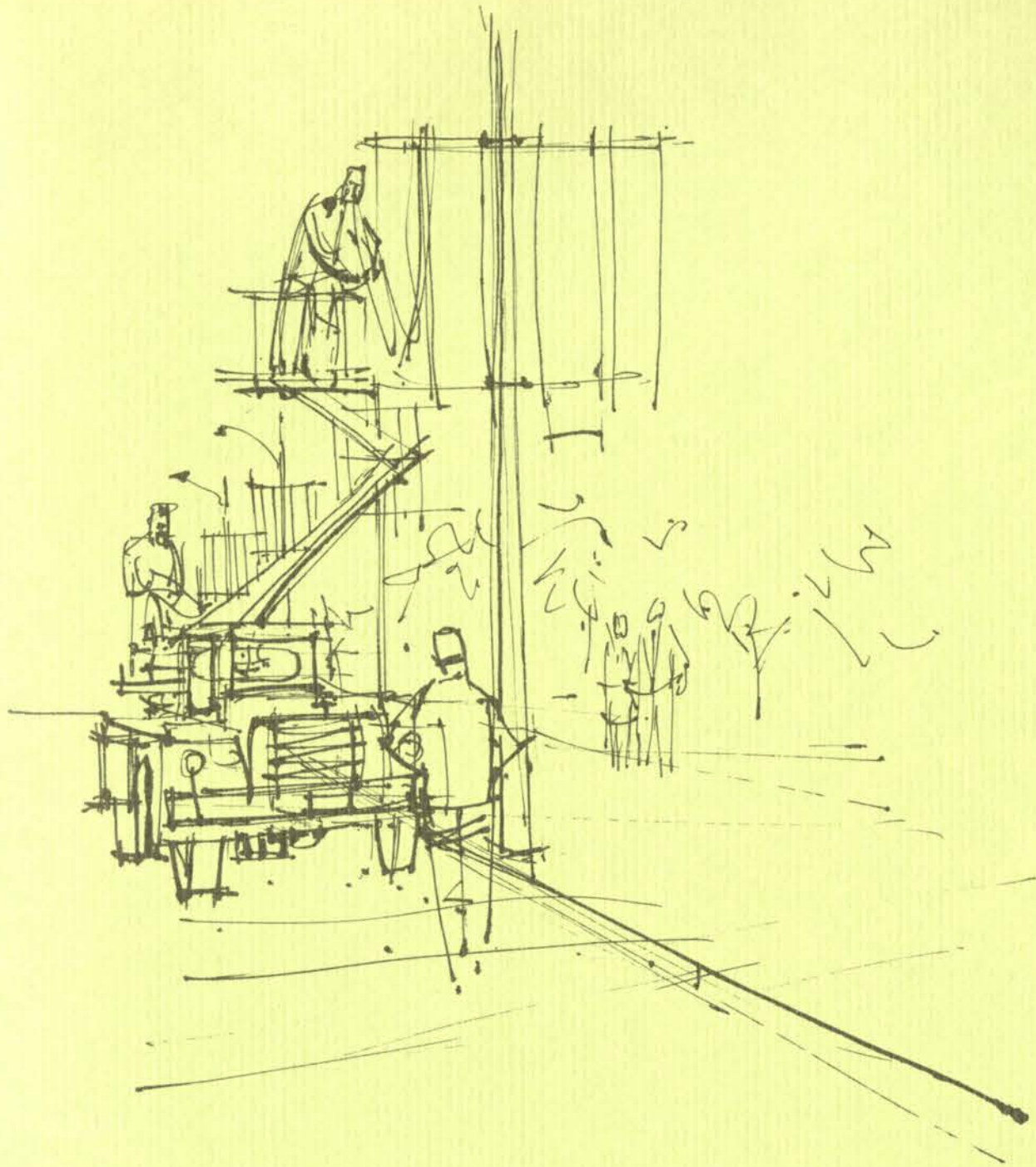
Au début de tout projet particulier, il est essentiel d'avoir des maquettes et des dessins à petite échelle pour obtenir l'approbation du comité et en évaluer le coût. Ceci permettra également de déceler et d'analyser les difficultés techniques de la fabrication, de l'érection et de l'entretien.

Dans les cas où le procédé de sérigraphie sera employé, les artistes devront préparer leurs stencils de façon à répondre aux exigences des entreprises locales. Ceux-là doivent prendre part aux choix du matériel nécessaire et connaître toute la gamme des encres, peintures, tissus, etc. particulièrement pour ce qui a trait à la résistance de ces produits lors d'une longue exposition au soleil, au vent et à la pluie.

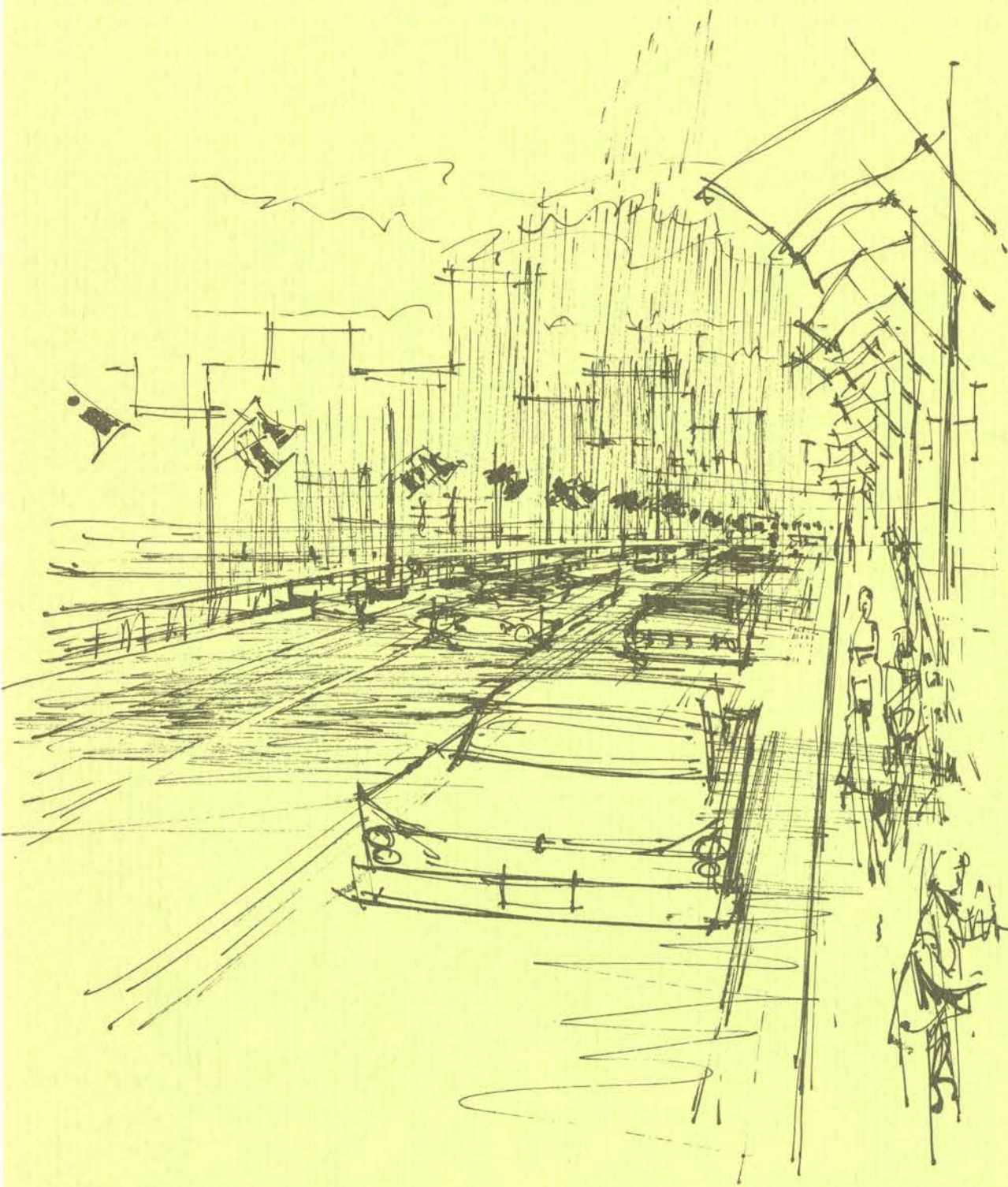
Le choix des couleurs, des variations et des progressions sera placé sous la responsabilité de l'artiste. Ce dernier doit en indiquer la teneur et l'usage sur le plan directeur afin que les fabricants et les équipes de montage puissent en profiter.

L'engagement de l'artiste peut être résilié à ce stade ou être maintenu si ces oeuvres de conception doivent être modifiées ou déplacées au cours de la période de festivités.









## Flags

The most frequently used type of decoration is flags, and no doubt a suitable place for flags, will be found in any scheme. There are however several hazards to be reckoned with in the use of flags. The worst of these is the tendency for flags to entangle themselves either by winding up on their own poles or by becoming caught up on wires or other projections. Flags should be used in areas where a prevailing breeze blows and should be placed in flag brackets which permit a reasonable spacing of flag poles, thus minimizing interference from each other. Perhaps the most desirable location for flag displays are the light poles on bridges. Here is usually found a prevailing breeze and an opportunity to obtain the fullest visual impact.

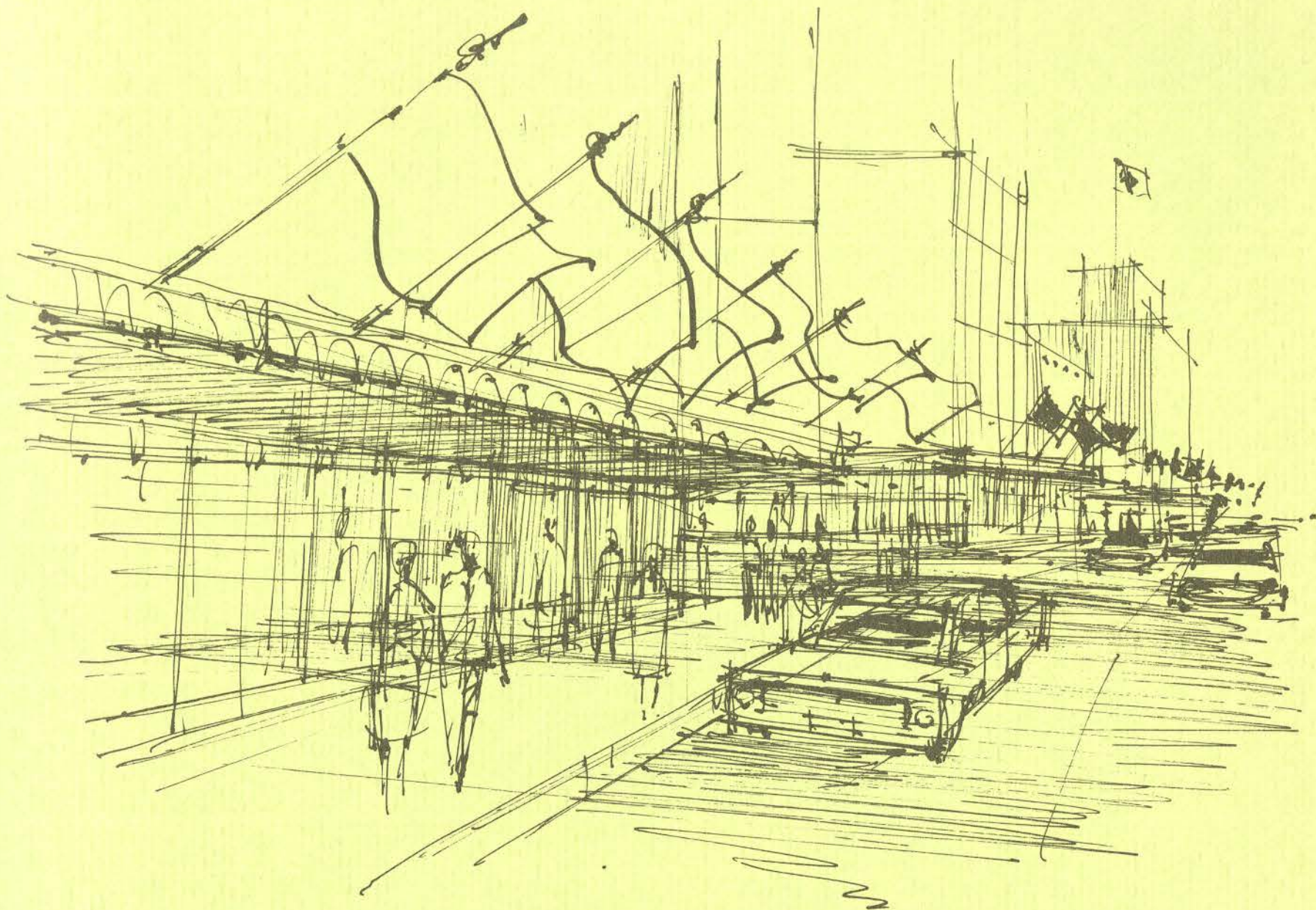
## Les drapeaux

Les drapeaux constituent la genre de décoration le plus fréquemment employé et il ne fait aucune doute que, dans tout projet, on pourra trouver un endroit adéquat pour leur installation. Toutefois, l'usage des drapeaux entraîne plusieurs inconvénients qu'il faut connaître, dont le pire est sans doute leur tendance à s'enrouler autour des mâts, câbles de tension et autres objets en saillie. La constance du vent doit être un facteur déterminant dans le choix de l'endroit où les drapeaux seront placés et leurs mâts doivent être montés sur des consoles permettant un espacement suffisant pour éviter toute interférence entre eux. Les lampadaires des ponts constituent sans doute l'endroit idéal pour déployer des drapeaux; il y a là généralement une brise constante qui permet d'obtenir un spectacle saisissant.

Flags - bridges and large open spaces are capable of producing brilliant displays - high density is important

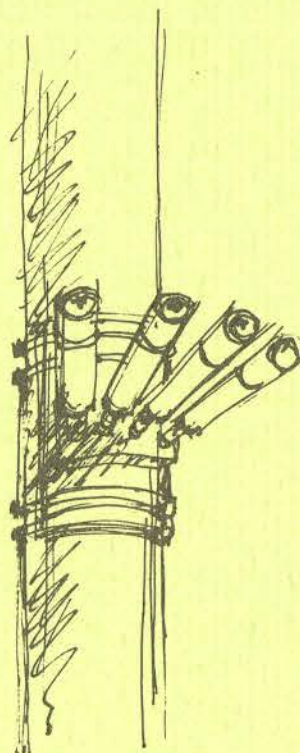
Les drapeaux, ponts et grands espaces libres sont aptes à la production d'étalages à grand effet - la concentration jouera un rôle important





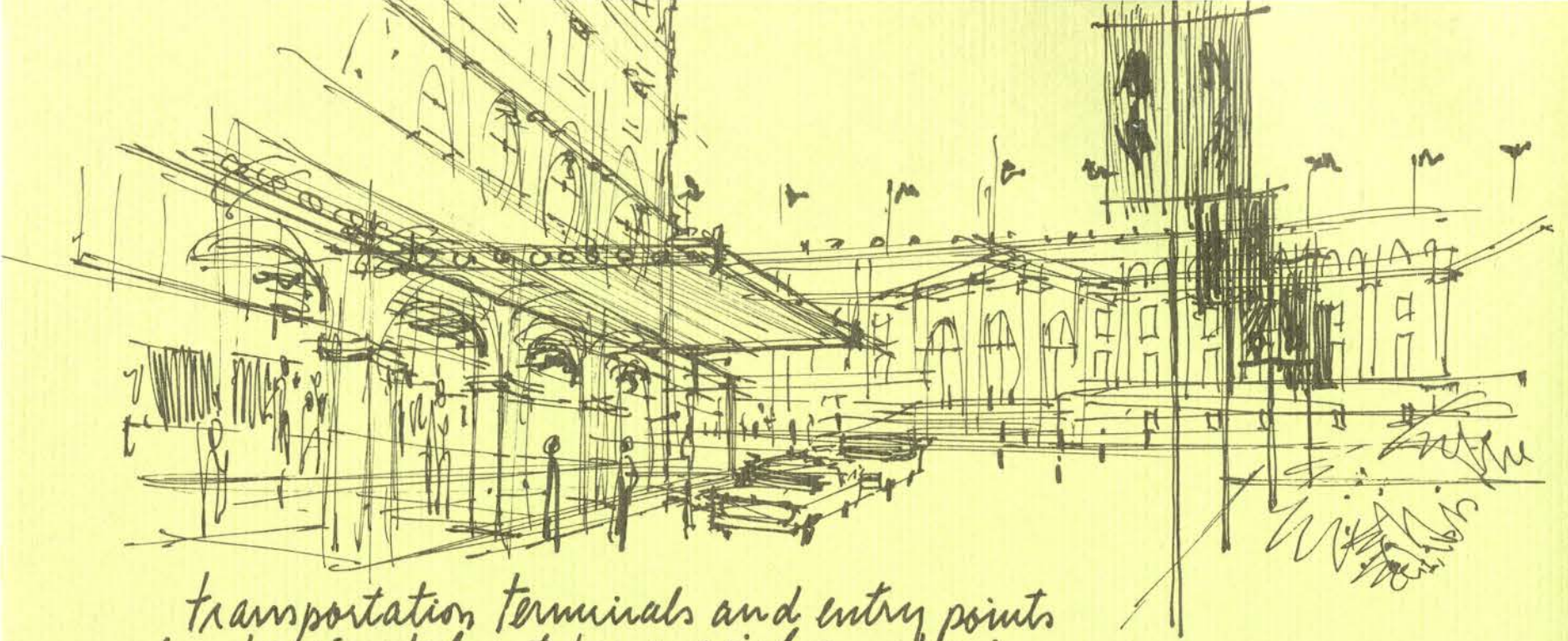
Supplement the plan by encouraging building owners to display flags at street level as well as roof tops

Compléter le plan en encourageant les propriétaires d'immeubles à disposer des drapeaux sur les toits et au niveau de la rue



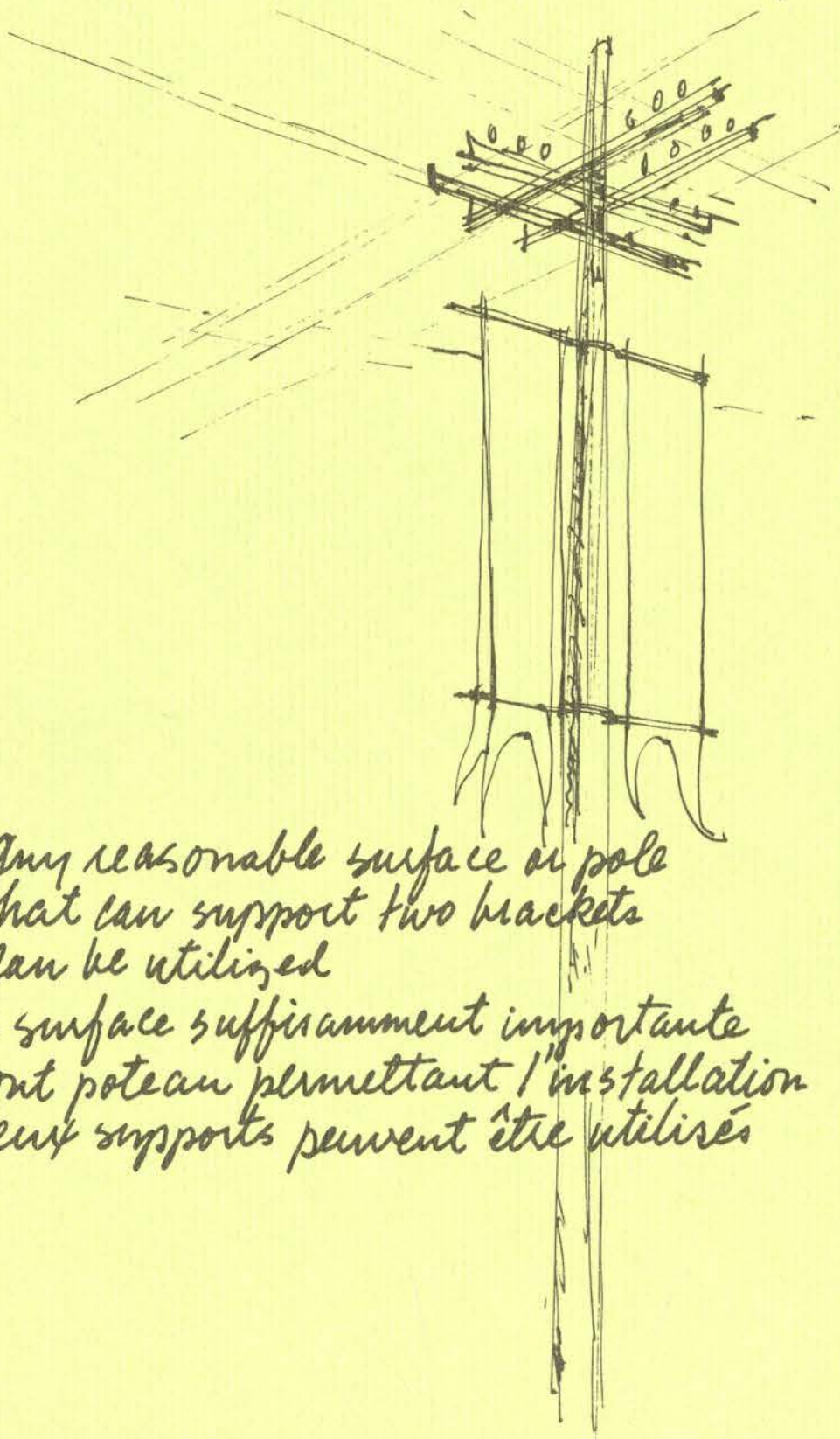
Flags can add dignity as well as colour  
Les drapeaux ajoutent autant de dignité que de couleur





transportation terminals and entry points  
can be singled out for special emphasis

les terminus et les divers points d'entrée peuvent  
être choisis comme des endroits de première importance



Any reasonable surface or pole  
that can support two brackets  
can be utilized

Toute surface suffisamment importante  
ou tout poteau permettant l'installation  
de deux supports peuvent être utilisés

### Banners

In Vancouver the most successful type of decoration and one which has been used for numerous separate occasions is the banner. These have evolved through experience into the shape and size illustrated. This format will give to the designers great freedom to create various effects of silhouette, colour and theme. They will withstand severe wind pressures and are capable of economical installation, maintenance and removal.

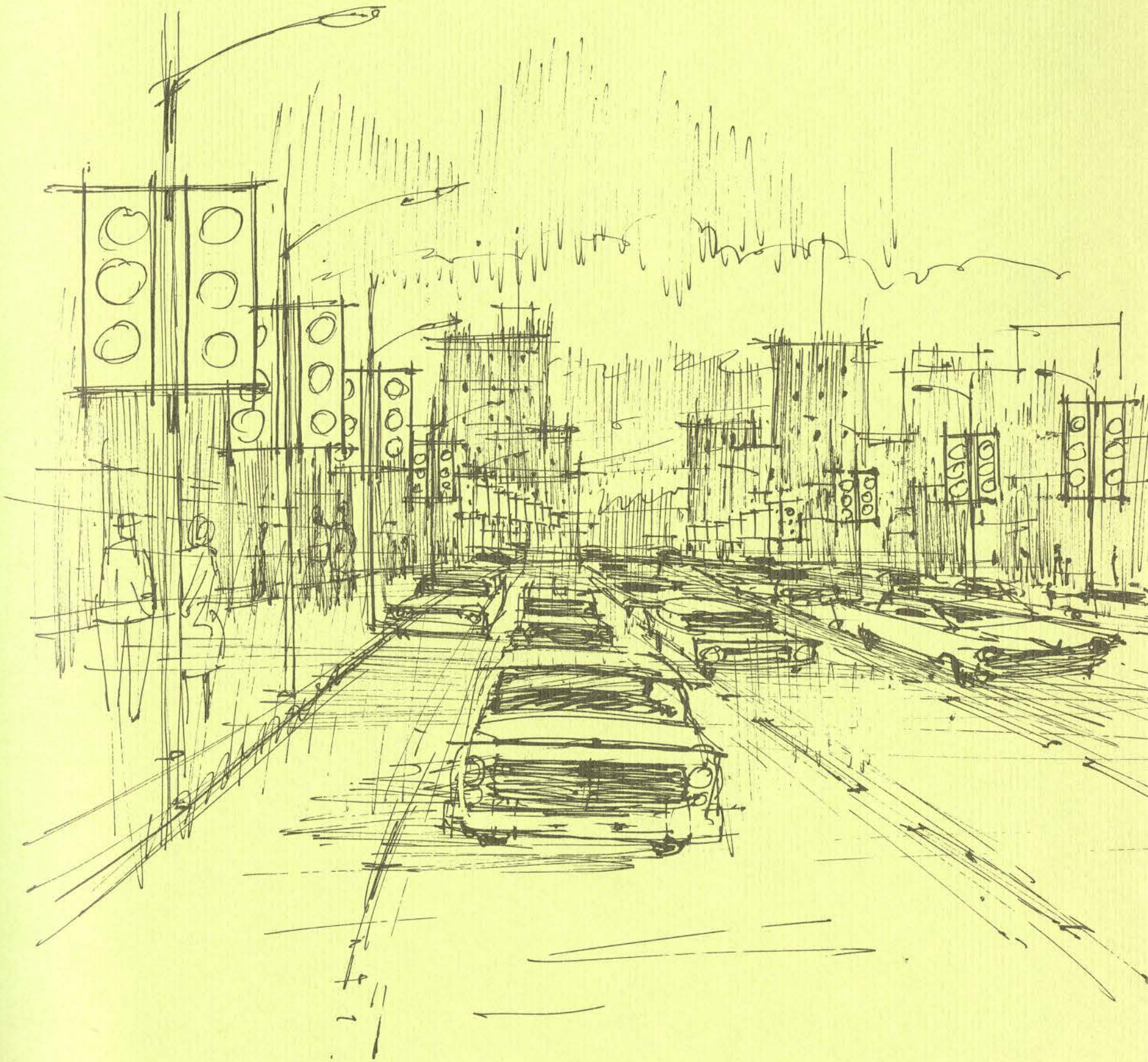
### Les bannières

L'un des genres de décoration qui a obtenu le plus de succès à Vancouver est sans contredit la bannière, laquelle fut employée de nombreuses fois en des occasions diverses. La forme et la dimension illustrées témoignent de son évolution par l'expérience acquise à l'usage. Le format illustré donnera aux esthéticiens une grande liberté dans la création de nombreuses variantes quant à la silhouette, la couleur et le thème. Les bannières sont susceptibles de résister à de fortes rafales de vent; il est également à noter que l'on peut les installer, les entretenir et les enlever très économiquement.

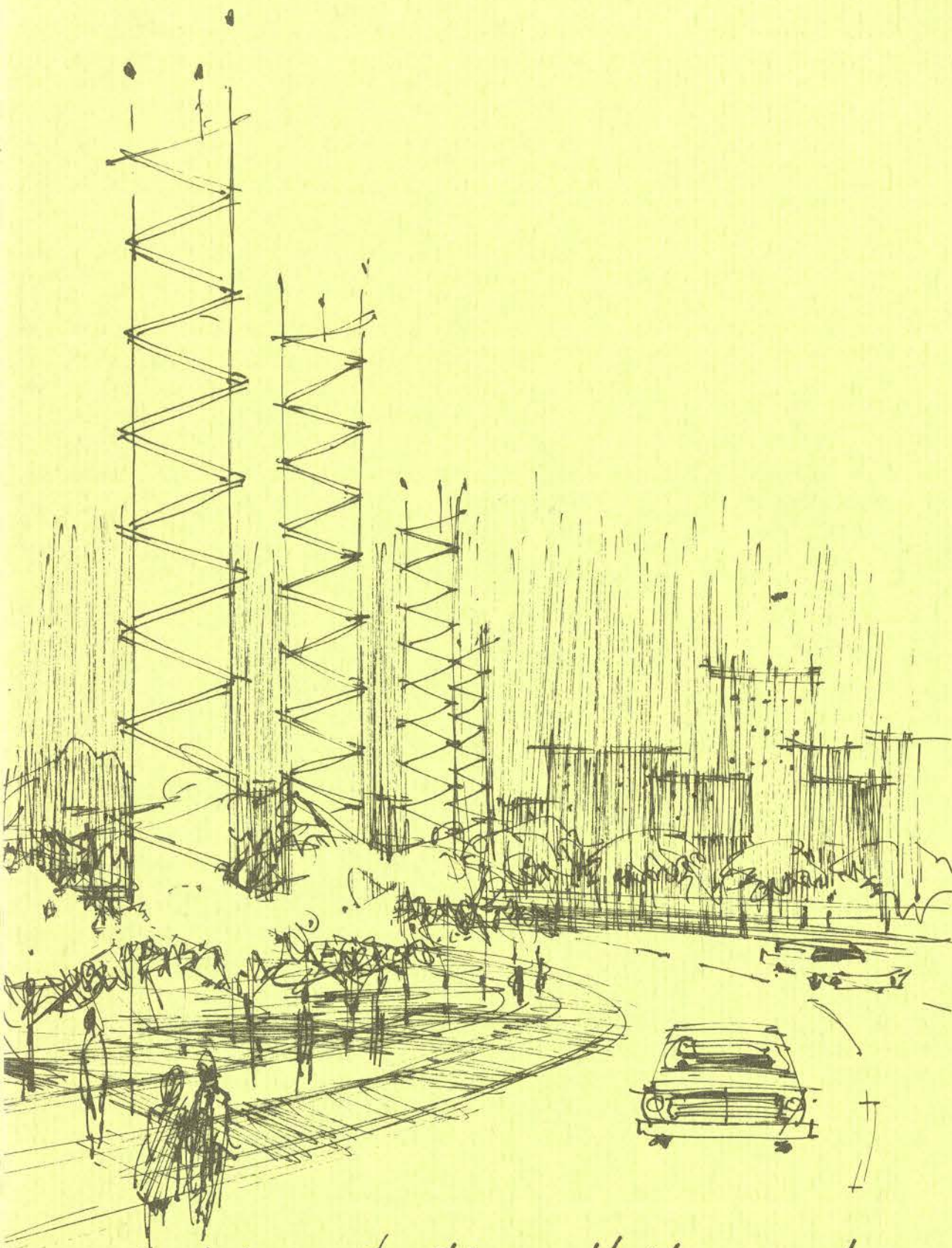


Unlike the flag - banners are a stable and constant display of colour - and through repetition will give the most impressive display - images both abstract and representational are natural to this format

Contrairement aux drapeaux, les bannières constituent un déploiement de couleurs stable et constant et offrent un saisissant spectacle grâce à la répétition







## Pylons

Unlike banners and flags, which rely on repetition and accumulative effect, the pylon is a singular and climactic device. Because of its nature, the pylon should be reserved for areas of major significance. The design opportunities in pylons are almost unlimited, and they lend themselves perfectly to the creation of movement, spectacular lighting effects and unusual audible sensations emanating from various types of suspended décor. Experience, however, has taught the authors that a pylon will not do the work of the banner, nor will the banner do the work of the pylon.

## Les pylônes

Le pylône est en quelque sorte un apogée dans le décor et constitue en soi un élément complet de décoration, ceci contrairement aux bannières et drapeaux dont on ne peut obtenir les effets recherchés que par répétition et accumulation. En raison de sa nature même, l'usage du pylône doit être réservé aux endroits les plus importants. Les opportunités de conception sont quasi illimitées lorsqu'il s'agit du pylône; il se prête parfaitement à la création de mouvements, aux effets de lumières et peut servir à procurer les sensations auditives hors de l'ordinaire à partir de nombreux genres de décorations variées. L'expérience a toutefois démontré qu'un pylône ne peut jouer le rôle d'une bannière et vice-versa.

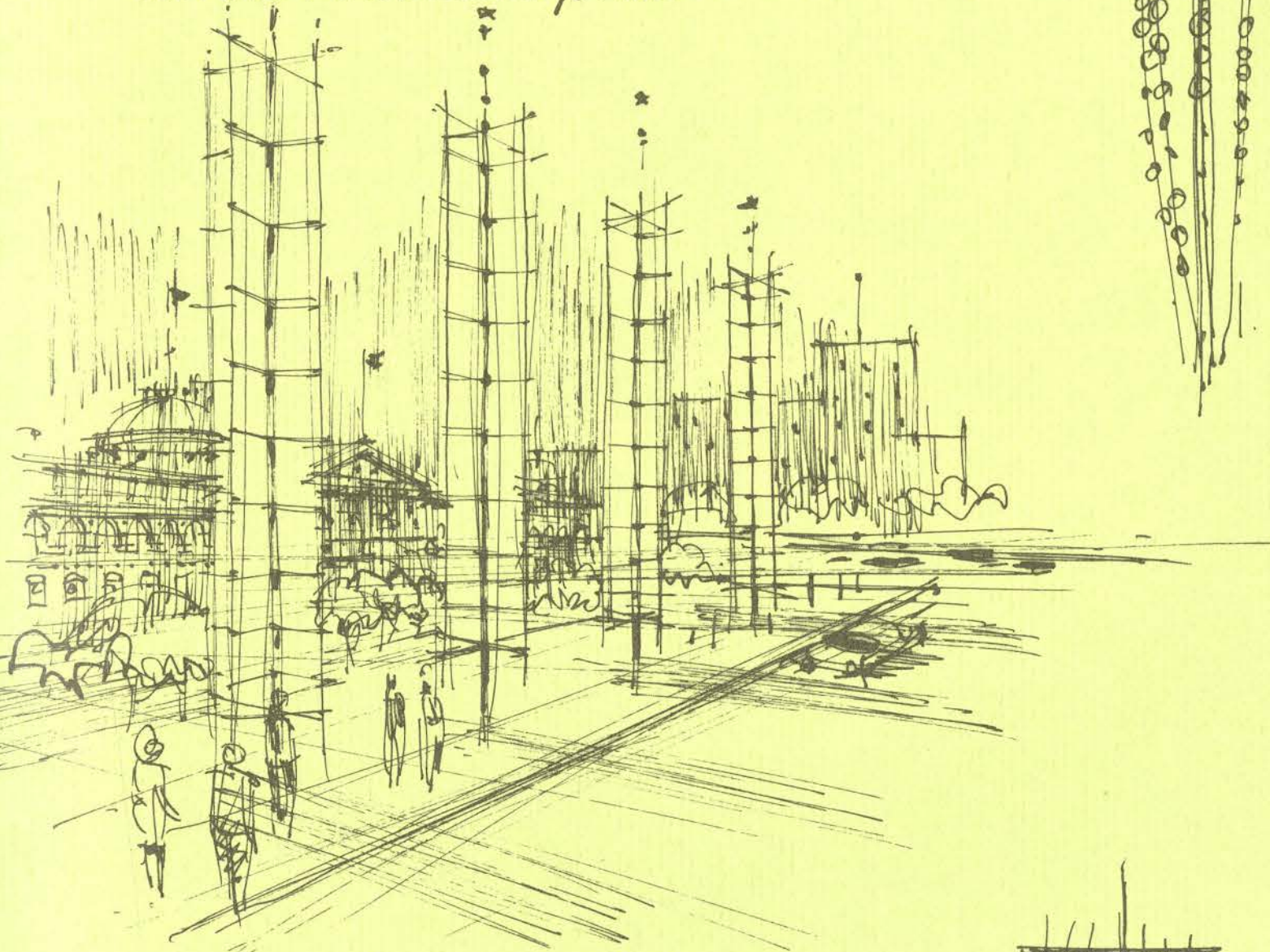
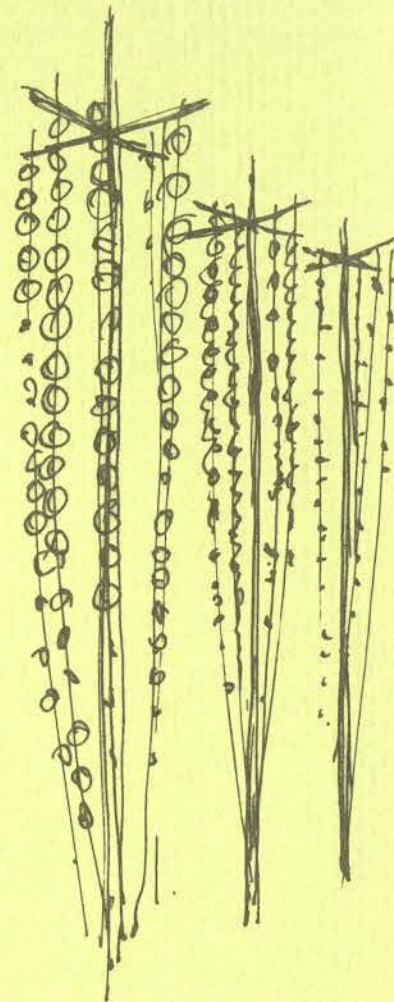
Modular construction & scaffolds can make an impressive tower in a park or intersection - this form can be clad with cloth or plywood.

L'érection d'échafaudages modulaires peut créer un ensemble impressionnant dans un parc ou à un carrefour. Ces structures pourront être recouvertes de toile ou de contreplaqué et il faudra tenir compte de leur résistance aux rafales de vent.



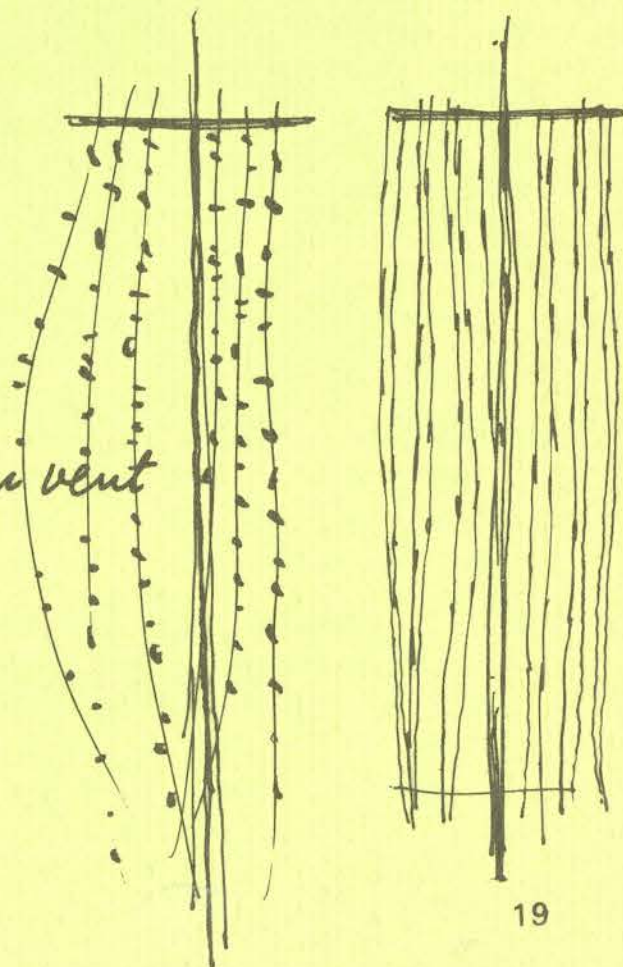
a wood cente pole of the type used  
by power companies can serve as a support  
without guy lines - many variations  
are possible

Un pylône central en bois, du genre de celui  
qu'utilisent les compagnies d'électricité peut  
servir de support sans câble de soutien.  
Nombreuses variantes possibles.

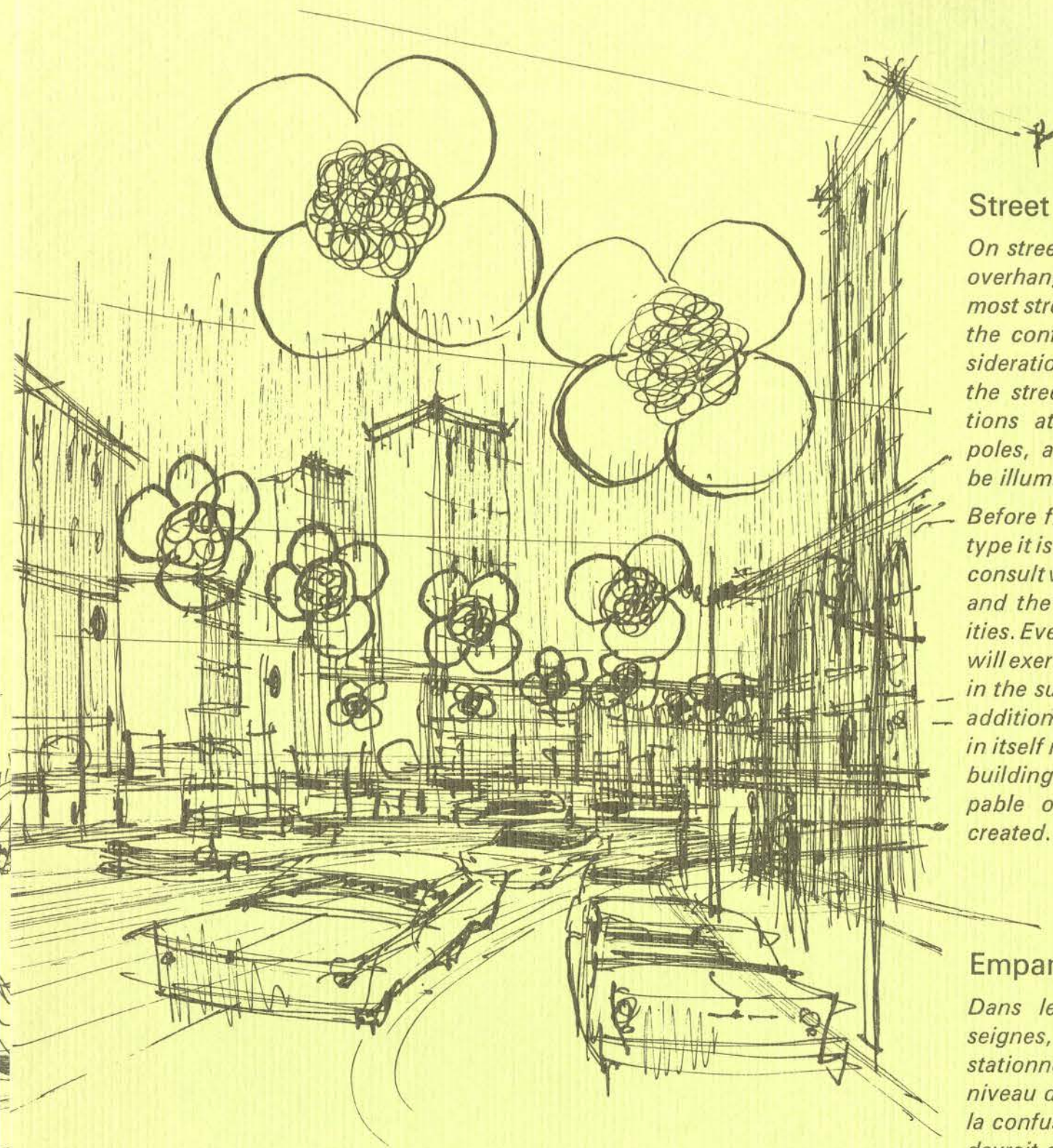


strings of christmas lights  
narrow cloth strips of brilliant colour  
fluttering metal discs

les fils électriques des décorations de Noël  
les oriflammes aux couleurs éclatantes  
les disques de métal qui s'entrechoquent au vent







## Street Spanning Devices

*On streets which are cluttered with overhanging signs, parked cars, etc., most street-side décor will be lost in the confusion. In these areas consideration can be given to spanning the streets with strings of decorations attached to trolley or light poles, and buildings. These could be illuminated.*

*Before finalizing any design of this type it is imperative that the designer consult with the municipal engineers and the power and transit authorities. Even the lightest of decorations will exert tremendous tensile stresses in the supporting member which, in addition to resisting the stress within itself must be attached to poles or buildings which must also be capable of coping with the forces created.*

## Empans sur les rues

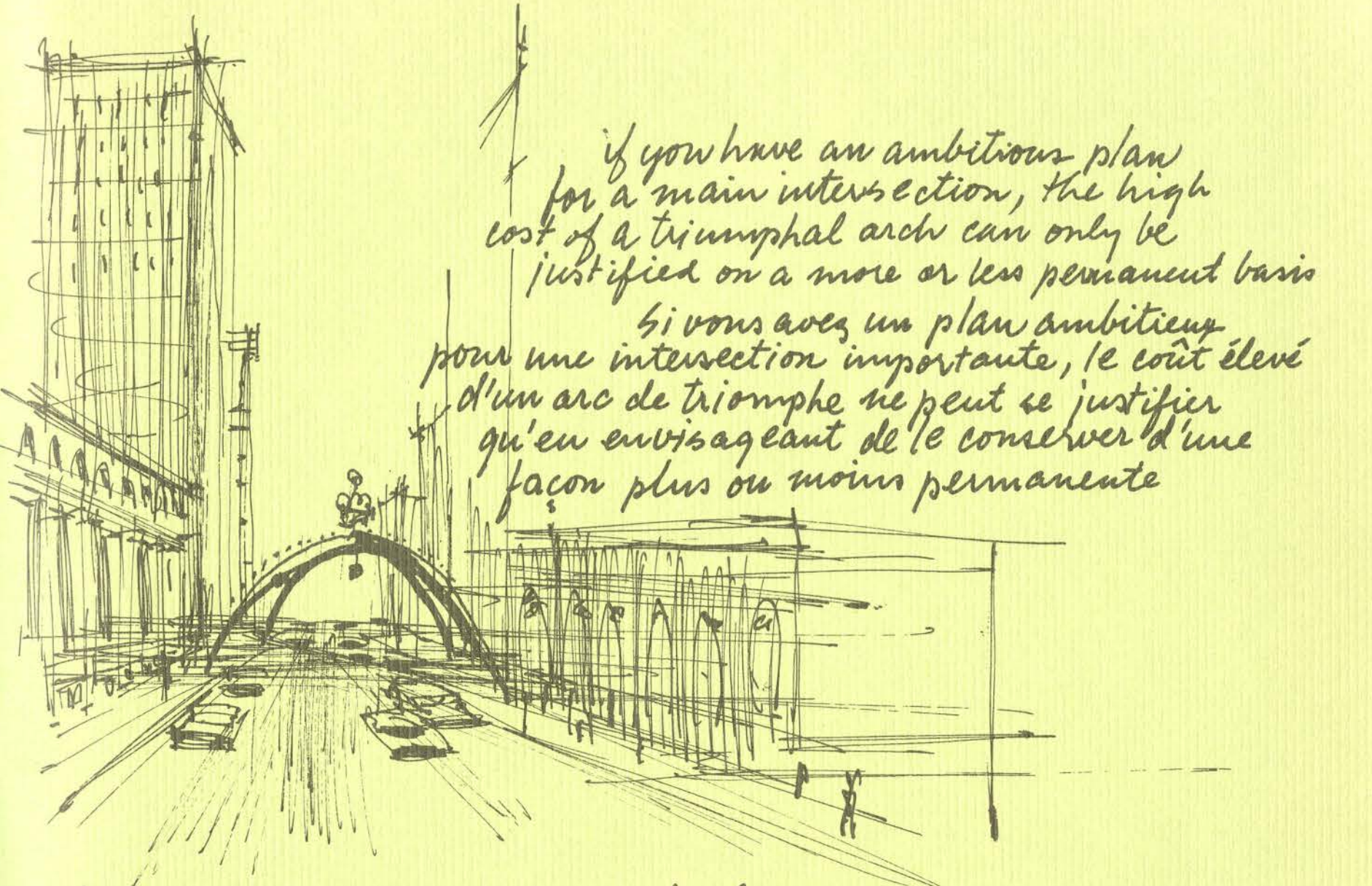
*Dans les rues surchargées d'enseignes, encombrées d'automobiles stationnées, etc. les décorations au niveau de la rue seront noyées dans la confusion. En de tels endroits, on devrait songer à installer des décorations sur des fils attachés aux poteaux, aux lampadaires ou aux édifices, lesquelles pourraient être illuminées.*

*Avant de compléter toute conception de cet ordre, il est impératif que l'esthéticien consulte les ingénieurs municipaux, les autorités des compagnies d'électricité et de transports en commun. Les décorations de ce genre, même les plus légères, exerceront une très forte tension sur leurs supports. Ces derniers, en plus de pouvoir résister aux pressions directes, devront être attachés à des poteaux ou à des édifices devant, eux aussi, être suffisamment résistants pour faire face aux tensions ainsi créées.*

*Floral designs constructed with light fiberglass webbing provide a minimum of wind resistance and a high degree of colour*

*Des arrangements floraux créés avec un tissu léger en fibre de verre présentent un minimum de résistance au vent et une grande richesse de coloris*



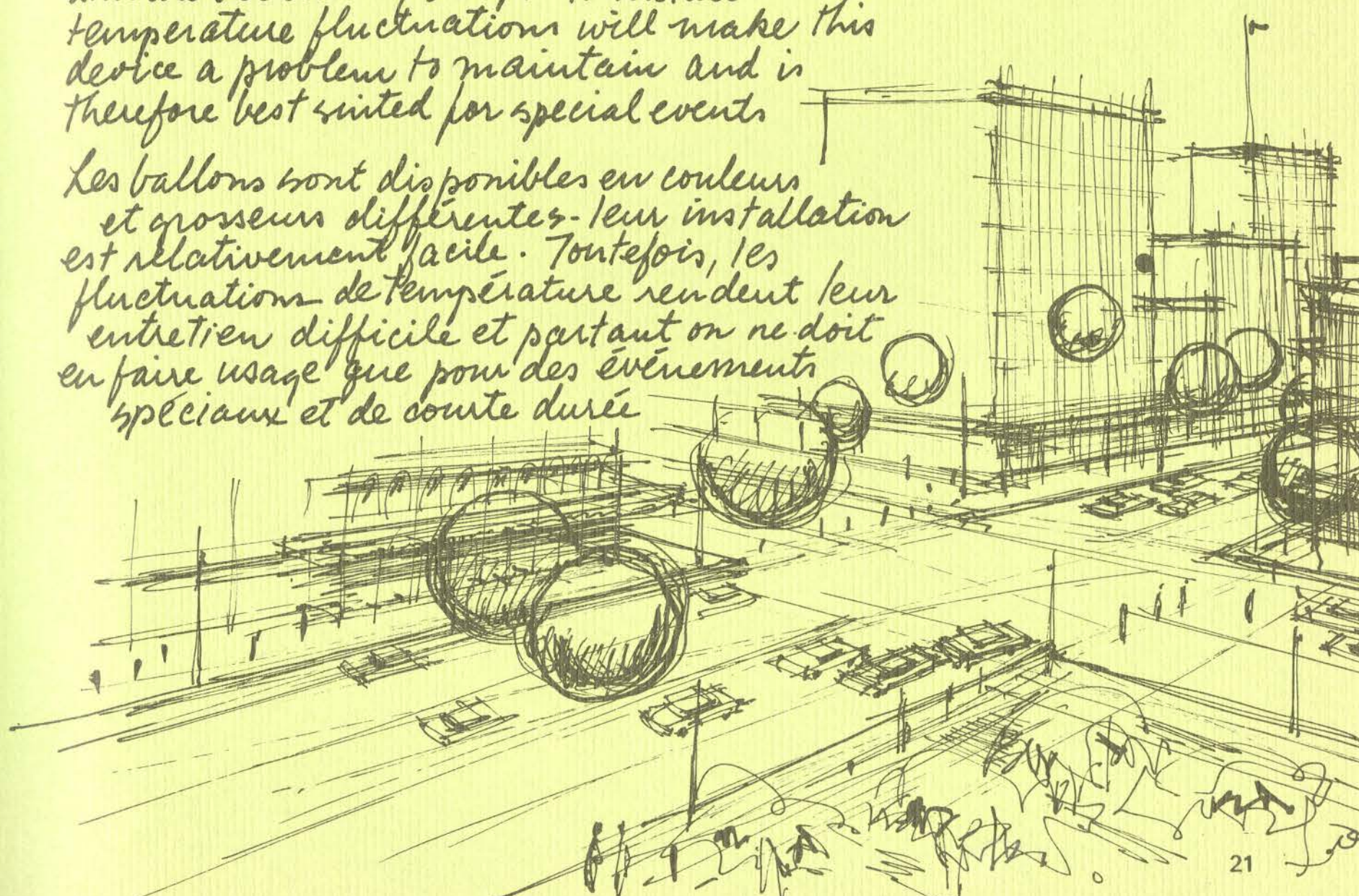


if you have an ambitious plan  
for a main intersection, the high  
cost of a triumphal arch can only be  
justified on a more or less permanent basis

Si vous avez un plan ambitieux  
pour une intersection importante, le coût élevé  
d'un arc de triomphe ne peut se justifier  
qu'en envisageant de le conserver d'une  
façon plus ou moins permanente

Balloons come in many sizes and colours  
and are relatively simple to install -  
temperature fluctuations will make this  
device a problem to maintain and is  
therefore best suited for special events

Les ballons sont disponibles en couleurs  
et grosseurs différentes. Leur installation  
est relativement facile. Toutefois, les  
fluctuations de température rendent leur  
entretien difficile et partant on ne doit  
en faire usage que pour des événements  
spéciaux et de courte durée



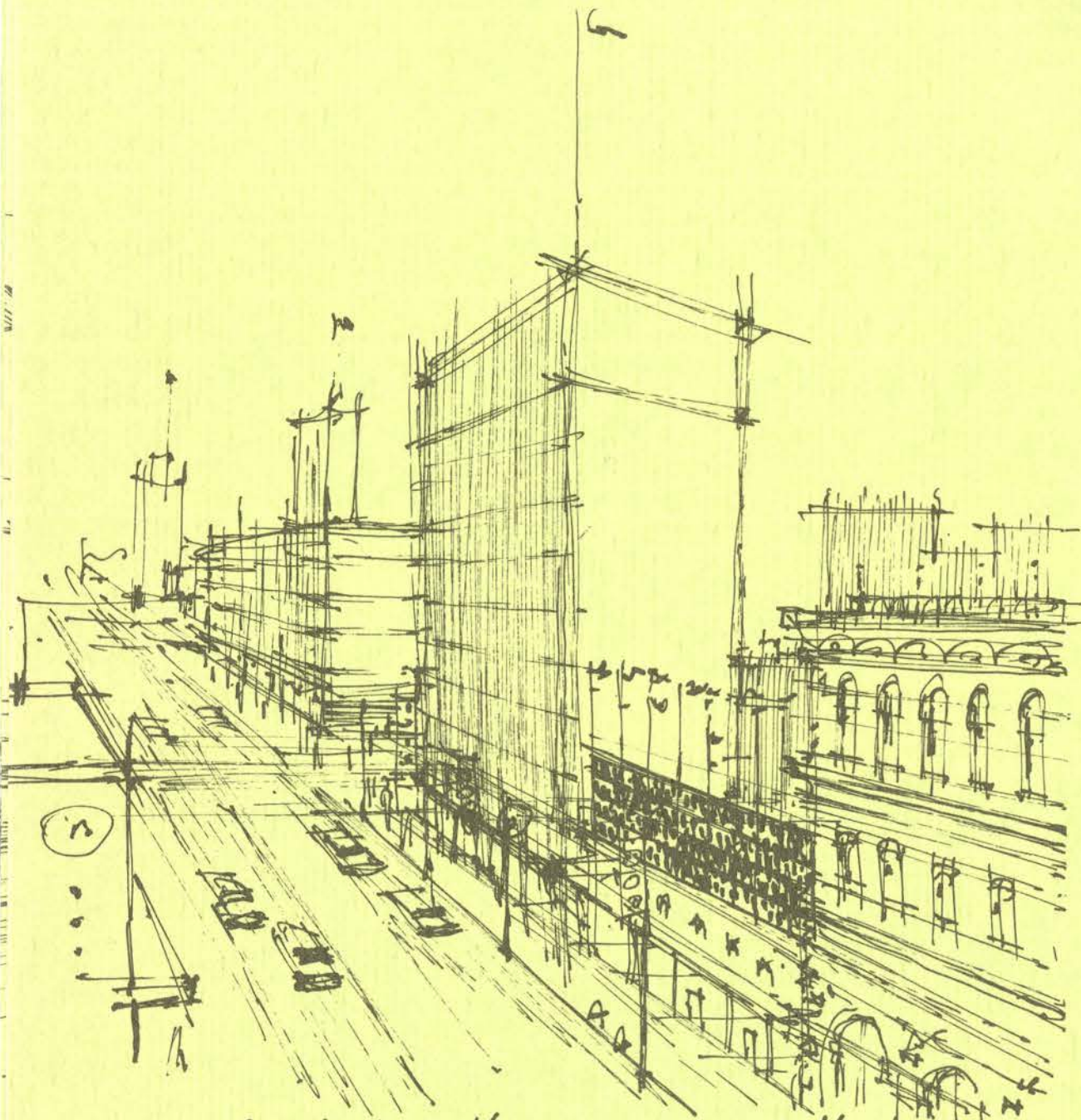


## Space Paintings

These can be erected at intersections, in the spaces in between buildings or on roof tops. They create an opportunity to cartoon historical incidents, to advertise special events, or merely create large abstract colour patterns. They can be rigid or can be composed of colour fragments which will flutter with air movement, while still maintaining their depictive or abstract qualities.

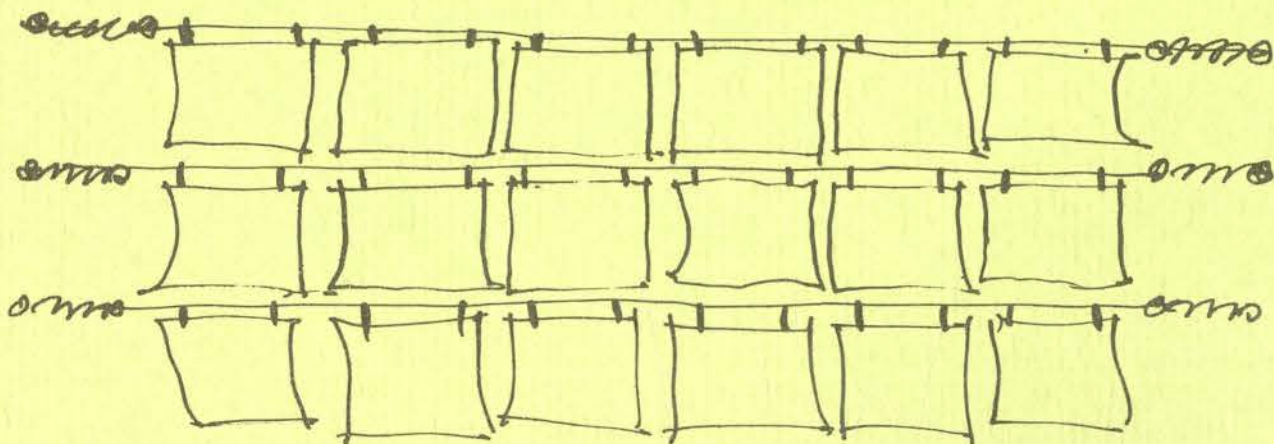
## Panneaux aériens

Les panneaux aériens peuvent être installés aux intersections, dans les espaces libres entre les immeubles ou sur les toits des édifices. Ils fournissent l'opportunité de dépeindre les événements historiques, permettent l'annonce des manifestations spéciales ou encore d'étaler de grands motifs aux multiples coloris. Ces panneaux peuvent être rigides ou encore être formés de fragments de diverses couleurs s'agitant sous l'effet du vent tout en conservant leur caractère figuratif ou abstrait selon le cas.



Anchoring the pennants at the top edge will give a brilliant display of motion with wind action the subject matter that can be depicted on this device is unlimited

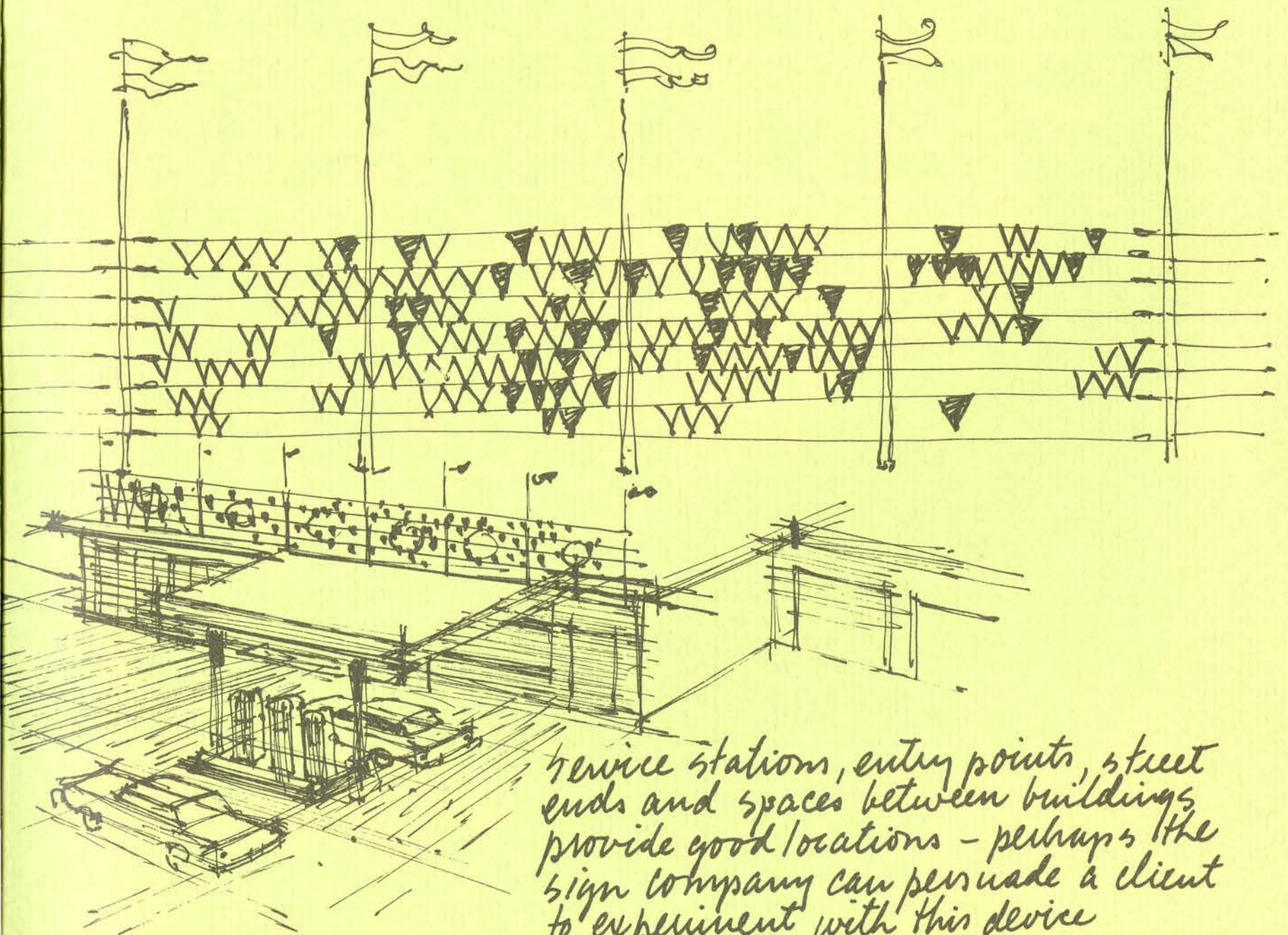
La fixation des banderoles par le haut offrira un brillant étalage que l'action du vent rendra plus éclatant encore - les motifs dont peuvent s'ornier ces banderoles sont illimités





Steel poles, steel wire and turnbuckles provide an economical basis for a large space frame. Coloured pennants provide the artist's palette

Les poteaux et les filins d'acier de même que les tendeurs de fils fournissent une structure économique pour un grand panneau aérien. Les banderoles de couleur constitueront la palette de l'artiste.



Service stations, entry points, street ends and spaces between buildings provide good locations - perhaps the sign company can persuade a client to experiment with this device

Les stations de service, les points d'entrée, l'extrémité des rues, ainsi que les espaces entre les immeubles fournissent de bons endroits. Il est possible que les fabricants d'enseignes persuadent un client d'employer ce genre de décoration

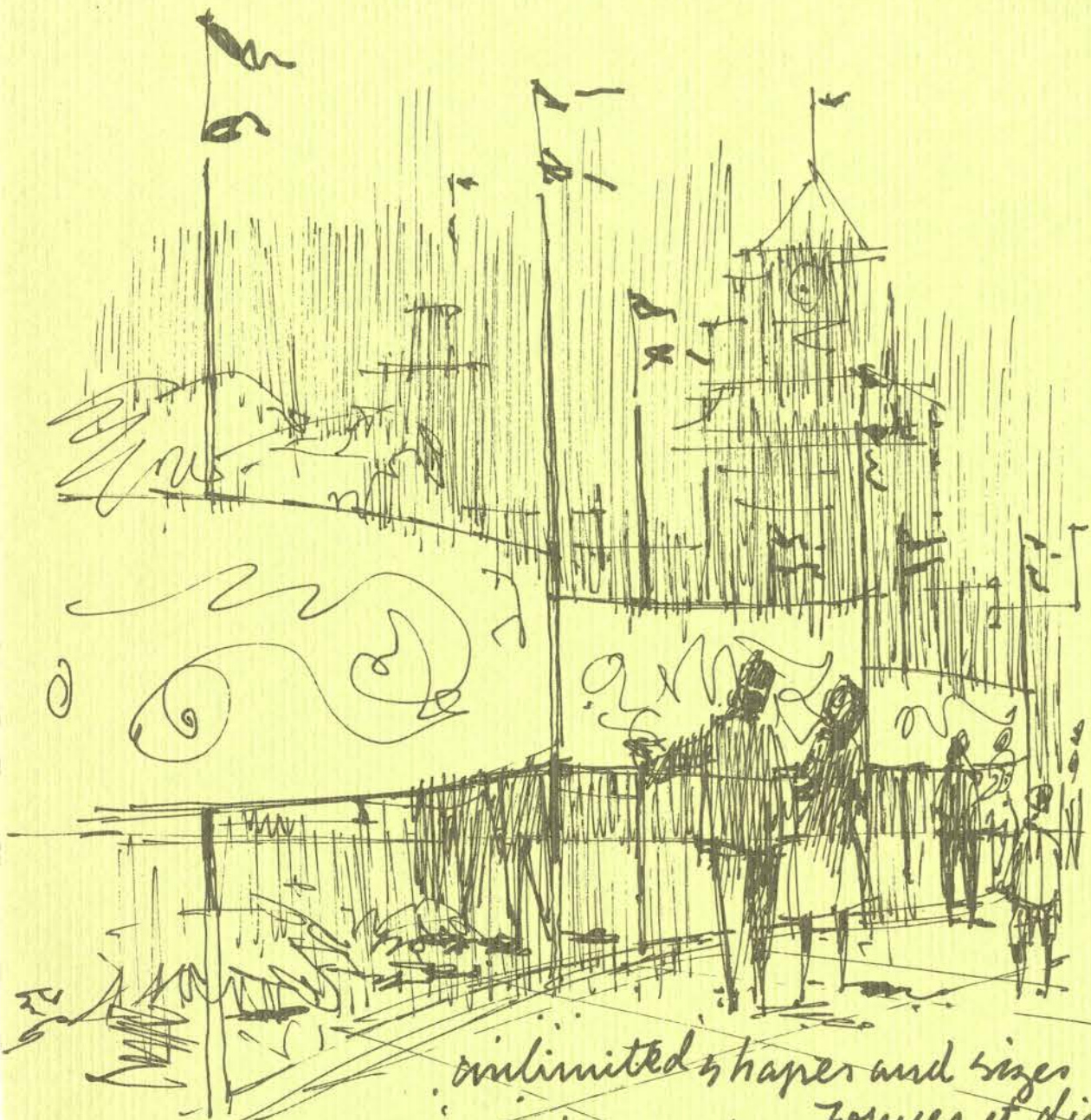


## Murals

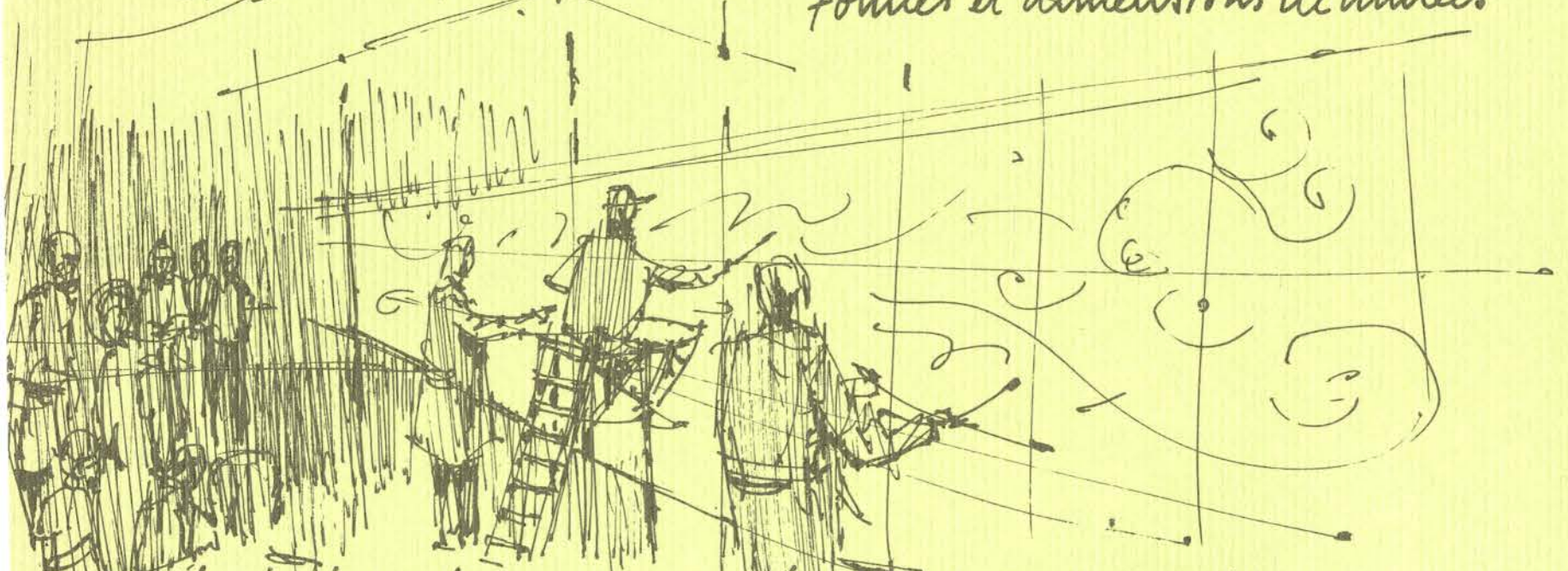
Murals will create an opportunity for local artists or art students to display their ability in this medium. They can be of a disposable nature, painted on plywood, or could be designed as permanent installations. In either case they will have great appeal if they are executed during the celebration period in the good weather months and in locations where the passerby can watch the artists at work.

## Les murales

Les murales, voilà une excellente opportunité pour les artistes locaux ou les élèves d'écoles d'art de faire montre de leurs talents. Elles peuvent être de conception temporaire, peintes sur du contre-plaqué ou encore érigées de façon permanente. Dans l'un ou l'autre des cas, elles susciteront beaucoup d'intérêt si elles sont exécutées pendant la période des célébrations au cours de la belle saison et si elles sont localisées en des endroits où les passants peuvent observer les artistes au travail.



unlimited shapes and sizes  
Formes et dimensions illimitées



The history of your area can be depicted on an outdoor mural - this can be a great attraction if the artists are also on display

L'histoire locale peut faire l'objet d'une murale extérieure  
le sujet peut devenir une grande attraction si les artistes sont présents

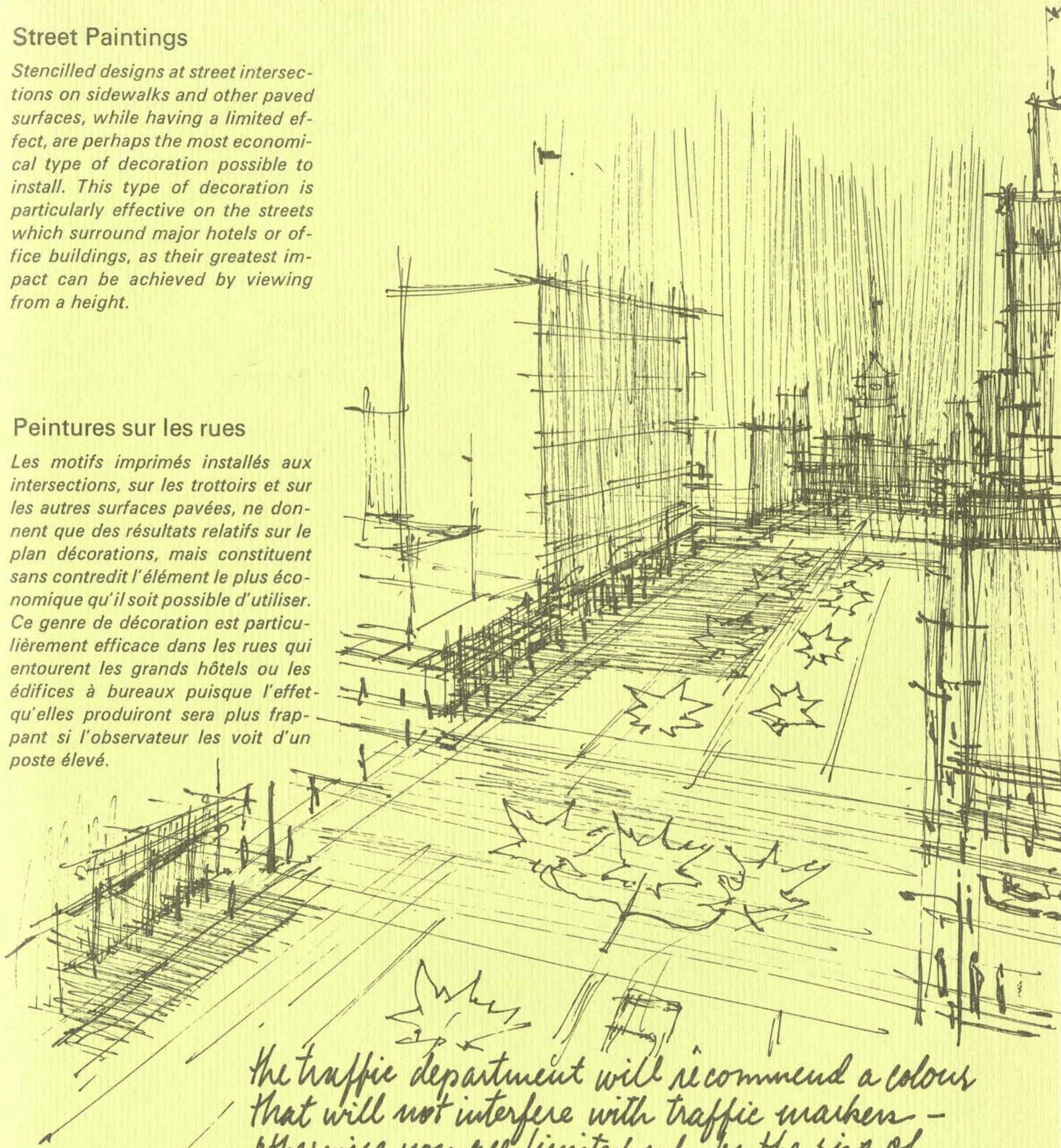


## Street Paintings

Stencilled designs at street intersections on sidewalks and other paved surfaces, while having a limited effect, are perhaps the most economical type of decoration possible to install. This type of decoration is particularly effective on the streets which surround major hotels or office buildings, as their greatest impact can be achieved by viewing from a height.

## Peintures sur les rues

Les motifs imprimés installés aux intersections, sur les trottoirs et sur les autres surfaces pavées, ne donnent que des résultats relatifs sur le plan décorations, mais constituent sans contredit l'élément le plus économique qu'il soit possible d'utiliser. Ce genre de décoration est particulièrement efficace dans les rues qui entourent les grands hôtels ou les édifices à bureaux puisque l'effet qu'elles produiront sera plus frappant si l'observateur les voit d'un poste élevé.



The traffic department will recommend a colour that will not interfere with traffic markers - otherwise you are limited only by the size of stencil

Le service de la circulation recommandera une couleur ne s'identifiant pas aux signaux routiers. Tenant compte de ce qui précède la seule limite aux possibilités est la dimension du décalque.



## Floating Objects

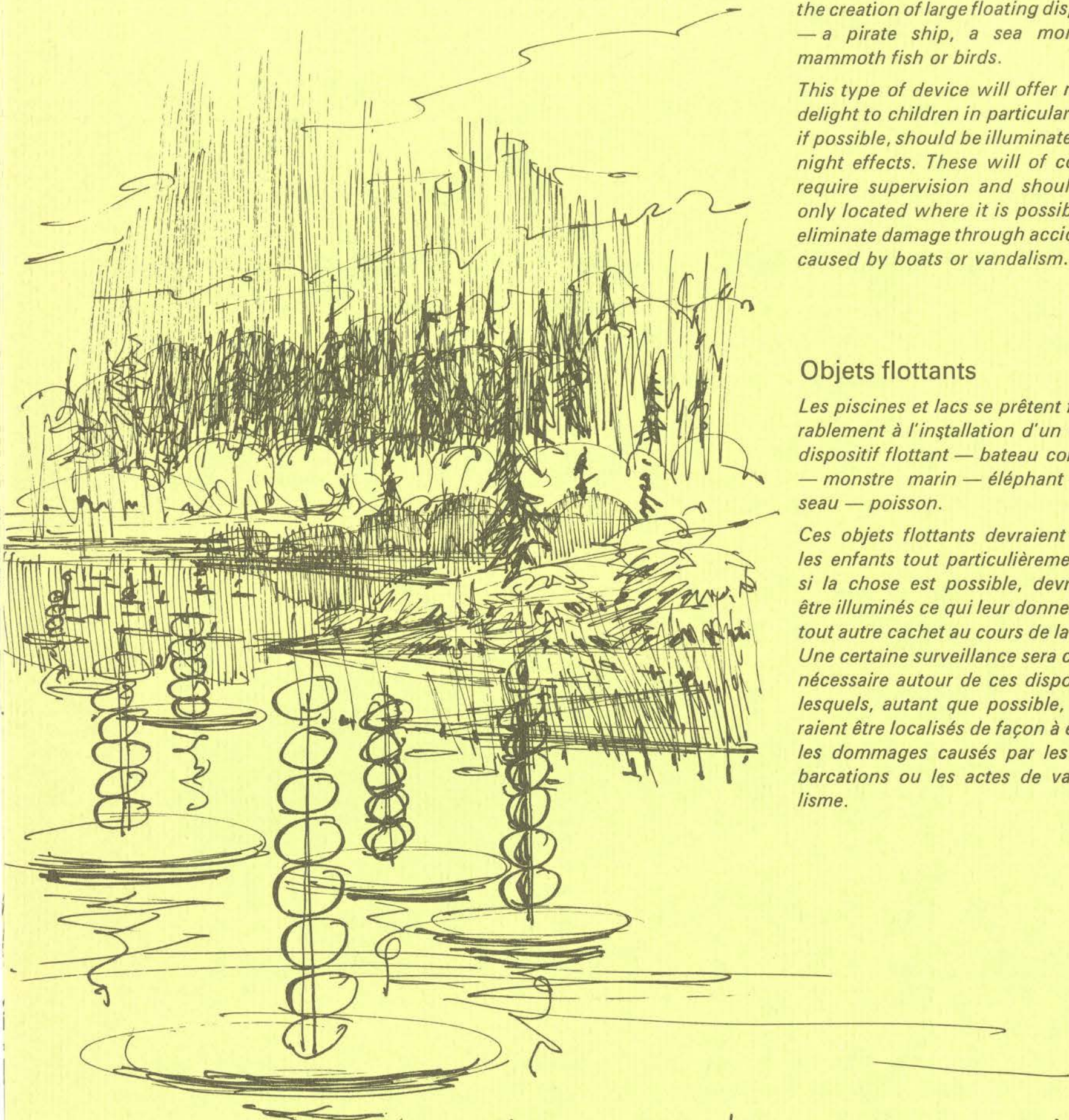
*Pools or lakes lend themselves to the creation of large floating displays — a pirate ship, a sea monster, mammoth fish or birds.*

*This type of device will offer much delight to children in particular and, if possible, should be illuminated for night effects. These will of course require supervision and should be only located where it is possible to eliminate damage through accidents caused by boats or vandalism.*

## Objets flottants

*Les piscines et lacs se prêtent favorablement à l'installation d'un vaste dispositif flottant — bateau corsaire — monstre marin — éléphant — oiseau — poisson.*

*Ces objets flottants devraient ravir les enfants tout particulièrement et si la chose est possible, devraient être illuminés ce qui leur donnera un tout autre cachet au cours de la nuit. Une certaine surveillance sera certes nécessaire autour de ces dispositifs lesquels, autant que possible, devraient être localisés de façon à éviter les dommages causés par les embarcations ou les actes de vandalisme.*



*An endless variety of flames, pennants and floating devices can be enclosed on ponds and around fountains*

*Une variété infinie d'oriflammes, de banderoles et d'objets mobiles pourront être disposés sur la surface des pièces d'eau et autour des fontaines*





if you have a favorite monster  
 this would be a good time to launch him  
 the children and the chamber of  
 commerce will be delighted

si vous avez un monstre préféré c'est le moment  
 d'en faire le lancement - les enfants et  
 la chambre de commerce en seront charmés

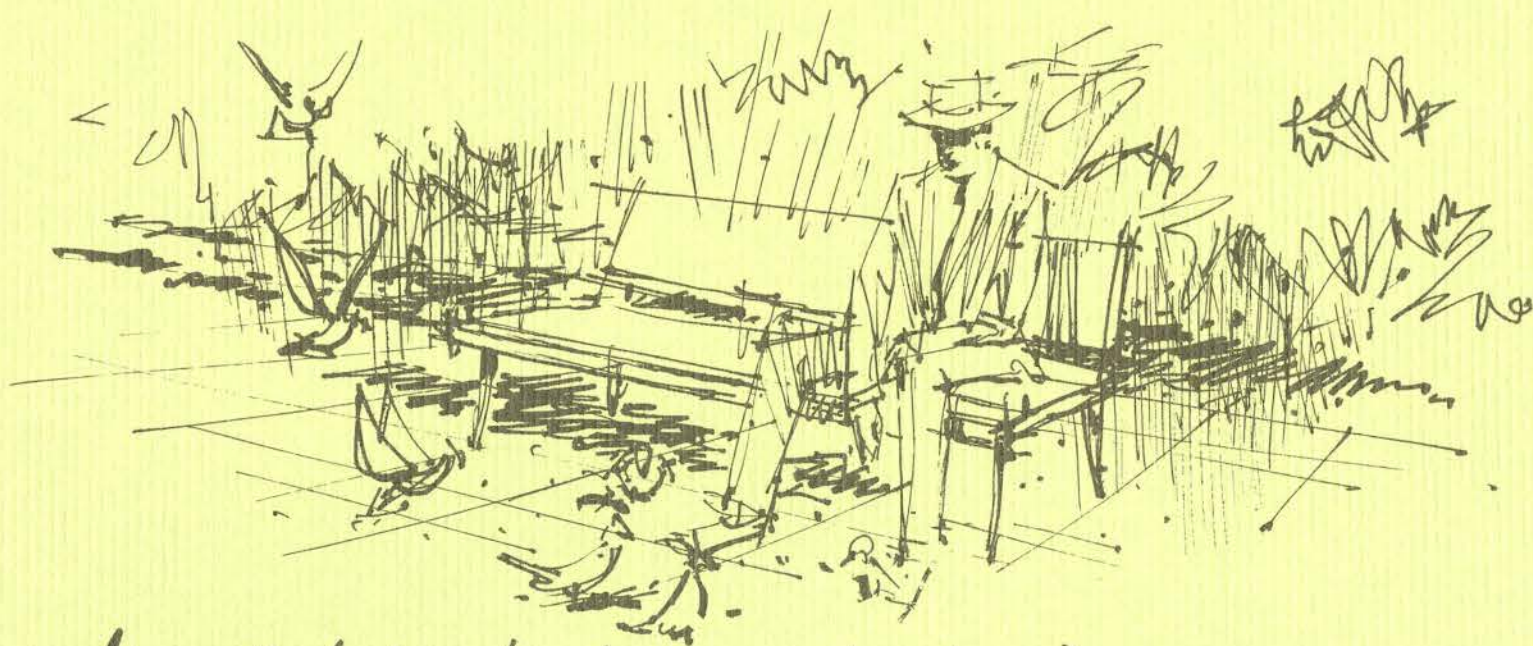
any scow or barge can be converted to a  
 variety of vessels - this can be done on a  
 relatively small body of water and  
 serve as a children's ride

Toute barge ou bateau peut se transformer en une variété  
 de vaisseaux - ceci peut être réalisé sur un petit étang et  
 pourra servir à balader les enfants



The most significant contribution of a decoration programme are those items of decor which become permanent reminders of a centenary or any other anniversary. These can take the form of small well-designed open spaces, fountains, sculpture, murals, or could be permanent improvements in street furnishings, light poles, benches, refuse containers etc.

The decorations committee will find that the intensive observation of their community will give to them a sharp awareness of the visual aspect of their city and enable them to assess the requirements of increased visual amenity.



La contribution la plus significative à un programme décoratif se constitue des éléments permanents qui perpétueront le souvenir d'un centenaire ou de tout autre anniversaire. Elles peuvent revêtir l'aspect de petits terrains dégagés et bien aménagés, de fontaines, sculptures, décoration murales ou peuvent consister en des améliorations permanentes dans l'aménagement d'une rue, de luminaires de rues, de bancs, réceptacles à déchets, etc.

Les membres du Comité de decorations pourront constater que l'observation poussée de leur environnement leur permettra de faire la mise au point de l'aspect visuel que donne leur ville et leur rendra possible l'évaluation de ce qui doit être fait pour la rendre agréable à l'œil.





## Publicity

A good decorations scheme will create much public interest both during the period of installation and previously throughout the design stage. The press, radio and television outlets can do a great deal towards the creation of an anticipation for the scheme. Advance photographs of designs are usually welcomed by the press. The committee can help by issuing periodic press releases giving the story of the theme, introducing the agencies involved, etc. A press reception just prior to installation is appreciated by the news media.

Publicity is an extremely important function. It is necessary to exercise good public relations practices in order to involve the people of the community in the general celebrations. Public relations professionals are usually quite willing to offer their services to either the main committee or the decorations committee.

The décor may prove to be controversial as regards to its design. This is not an unwelcome attribute as it will enliven publicity and create a desirable awareness of the scheme.

## Publicité

Un bon projet de décorations suscitera beaucoup d'intérêt dans le public au cours de la période de réalisation et préalablement durant la phase de la conception. Les organes d'information, presse, radio et télévision peuvent contribuer énormément à créer dans la population, un sentiment d'expectative. Les photos des projets seront encore mieux accueillies par les journalistes si elles leur sont remises avant la réalisation. Le comité peut apporter un précieux concours à cette campagne publicitaire en préparant des communiqués de presse périodiques, lesquels pourront traiter de l'histoire du thème, faire connaître les organismes impliqués, etc. Juste avant le stade de la concrétisation, une conférence de presse donnée au cours d'une réception est généralement fort appréciée par les medium d'information.

La publicité joue un rôle primordial. Entretenir d'excellentes relations publiques est nécessaire si l'on veut intéresser les citoyens aux célébrations. D'habitude, les publicitaires offrent de bon gré leurs services au comité principal ou à celui des décorations. Les décorations peuvent être sujet à controverses quant à leur conception. On ne doit pas éviter cette éventualité puisqu'elle est de nature à promouvoir la publicité et à stimuler l'intérêt autour du projet.



## The Co-operation of Organizations and Private Enterprise

Various civic organizations such as the Chamber of Commerce, Downtown Business Association, Community Arts Council, service clubs, etc., should be asked for their support and co-operation at an early stage. Support from such groups will do much towards stimulation of interest by business, the civic administration, parks and recreation boards, school boards, and private citizens. All of these groups can, by interested and enthusiastic support, do much towards the creation of a comprehensive and well-received scheme.

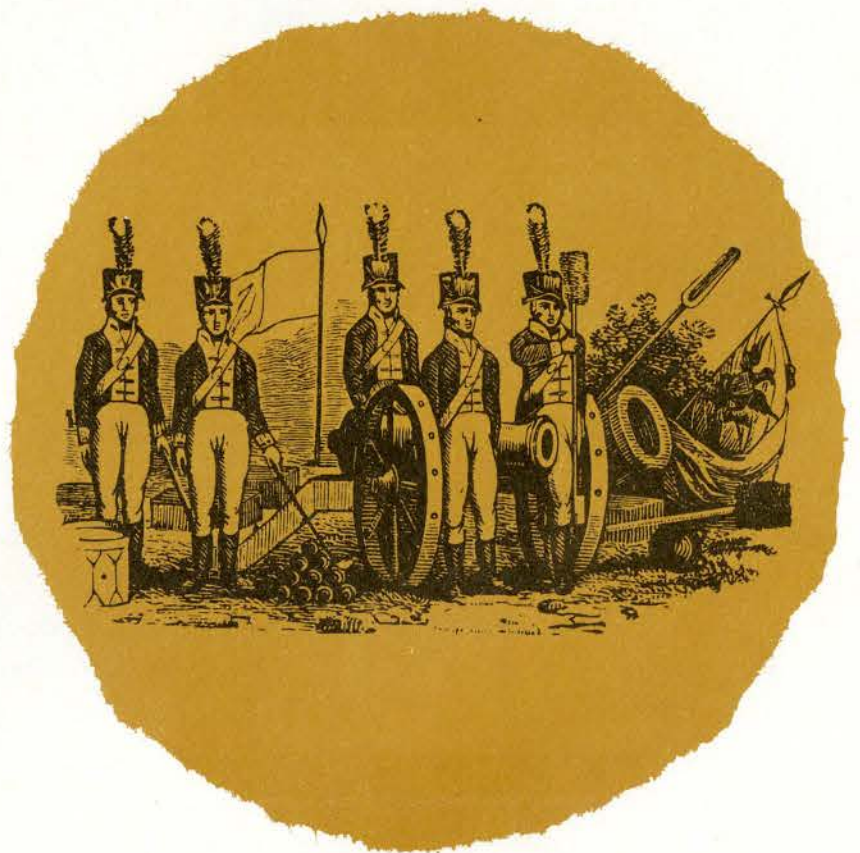
The Chamber of Commerce can provide both manpower and executive assistance for special events where costs of professional labor might otherwise be prohibitive. This is particularly true in small communities.

A comprehensive decorations scheme should, in addition to the items paid for totally by the Centenary Committee, include decorations by private enterprise. Service station roofs for example are excellent locations for spectacular display in the form of space paintings or humorous papier-mâché figures. Large office buildings and department stores should be encouraged to decorate and to install special lighting. In order to stimulate this type of activity, the Decorations Committee should prepare a dramatic presentation including color slides of their proposals suitable for showing at a mass meeting of potential business firms. Any appeal of this nature made to business organizations should take place one full year prior to installation in order that firms may include the cost of décor in their annual display budgets.

Community Arts Councils or similar groups should find an opportunity through décor to draw attention to, or in fact implement, various plans they may have long cherished.

The foregoing examples serve to illustrate only a few of the many possible avenues of support open to an active Decorations Committee. By the exercise of initiative and imagination, the contribution available by these groups can be marshalled; and much willing effort will be forthcoming. As further examples, youth groups, Boy Scouts, historical societies, ethnic groups, and others should be encouraged to participate. If their enthusiasm is generated, it will do much toward the ultimate success of a lively scheme.

In considering the above, it may be a timely reminder to have chosen a chairman for your committee who is well known and conversant with business and community groups.





## Participation des corps intermédiaires et de l'entreprise privée

Dès le début de l'entreprise, on devrait requérir le concours des divers organismes de la ville, tels la Chambre de Commerce, l'Association des hommes d'affaires, le Conseil des arts, les clubs sociaux, etc. La collaboration de chacun de ces groupements servira de stimulant pour les hommes d'affaires, le conseil municipal, le comité responsable des parts, celui des loisirs, les commissions scolaires et les citoyens en général. Un appui intéressé et enthousiaste de ces divers organismes peut favoriser la conception d'un projet de grande portée et l'accueil qui lui sera fait par la population.

Outre les cadres qu'elle peut fournir, la Chambre peut consentir une aide administrative pour des événements spéciaux lesquels, si on avait recours à des professionnels, entraîneraient des déboursés prohibitifs.

L'entreprise privée devrait contribuer financièrement à la réalisation de tout projet d'envergure, contribution qui permettrait d'ajouter aux éléments payés par le Comité du centenaire. A titre d'exemple, les toits des postes d'essence constituent des sites excellents pour l'aménagement de peintures aériennes ou pour le montage de personnages humoristiques en paper mâché. On devrait encourager les propriétaires d'édifices à bureaux et de magasins à rayons à décorer et à installer des jeux de lumières. Pour stimuler ce genre de participation, le Comité de décorations devrait, à l'aide de diapositives en couleurs, préparer une présentation visuelle du projet, susceptible de servir à l'occasion de diverses réunions publiques, ou encore d'assemblées d'entreprises commerciales importantes. Toute tentative d'intéresser les entreprises privées doit précéder d'au moins un an la réalisation de ce projet, ceci, afin de permettre à celles qui pourraient être intéressées, la possibilité d'inclure dans leur budget les dépenses qu'elles ont l'intention de consacrer à cette fin.

Ce programme de décoration devrait fournir au Conseil des Arts ou à tout autre groupe similaire l'opportunité d'attirer l'attention sur lui ou encore de mener à bonnes fins diverses réalisations dont il projette la concrétisation depuis longtemps.

Les exemples qui précèdent illustrent quelques-uns des nombreux moyens d'appui sur lesquels peut compter un Comité de décoration actif. Grâce à l'initiative et à l'imagination, la contribution de ces divers organismes peut être canalisée et se transformer en un immense effort des bonnes volontés. Encourager la participation des associations de jeunesse, des scouts, des sociétés historiques, des groupes ethniques sont autant d'autres exemples. Si l'on peut soulever leur enthousiasme, ces participations contribueront largement au succès final d'un programme vivant. Considérant ce qui précède, il peut être utile de rappeler l'importance de choisir un président bien connu dans le monde des affaires et familier avec les divers organismes communautaires.





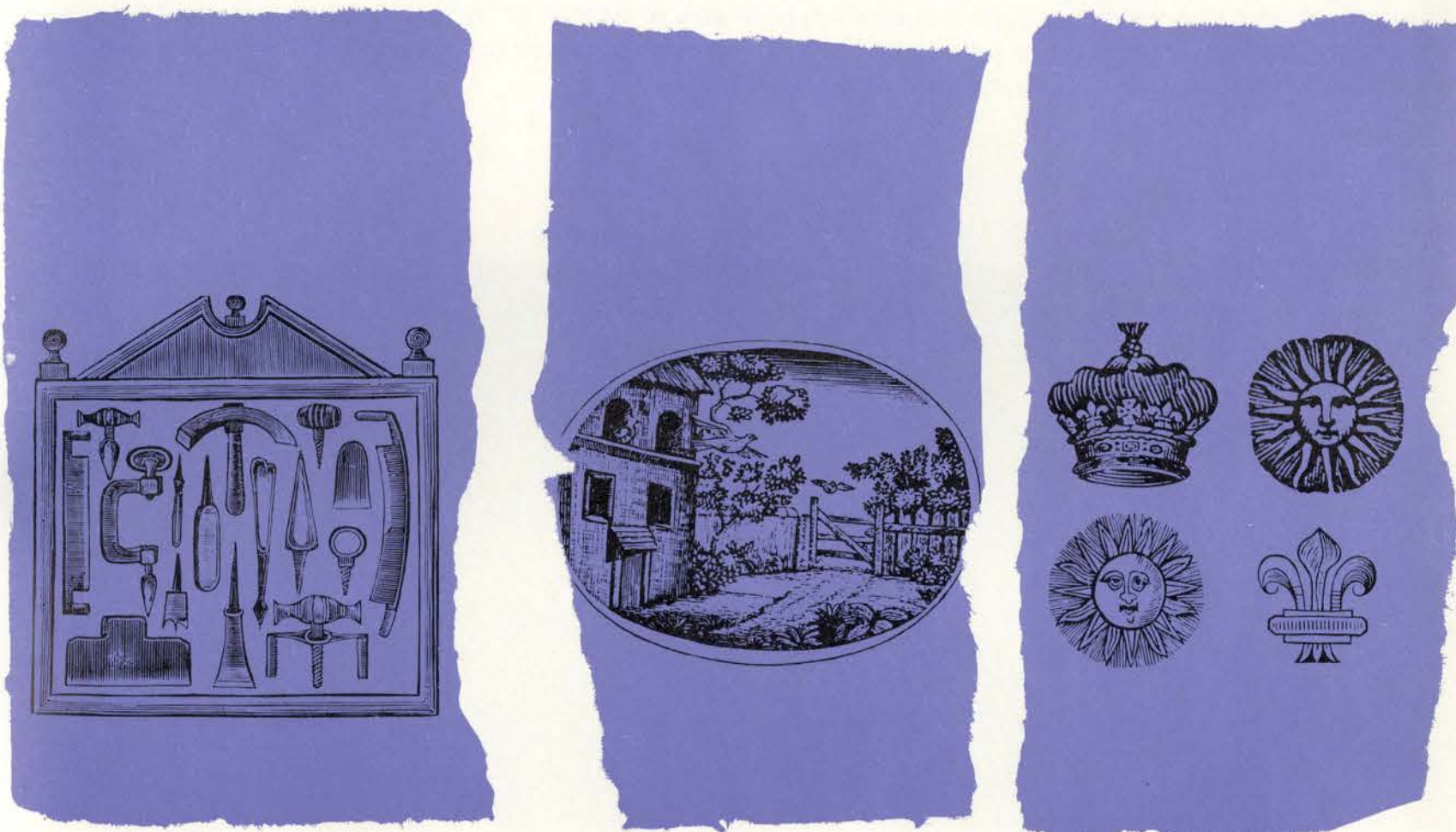


## Consultation

Before any scheme is finalized the decorations committee should consult with the following :

1. THE CITY ENGINEERING DEPARTMENT in order to establish vehicle clearance heights required and to ensure that decorations will not create potential hazards due to confliction by location or colour with traffic signals, signs or other warning devices.
2. THE PUBLIC UTILITIES in order to ensure that decorations will not interfere with power and telephone lines or trolley wires and to determine whether poles to be used are capable of withstanding additional stresses.
3. THE CITY LEGAL DEPARTMENT for purposes of insuring against public liability and property damage.
4. OWNERS OF PRIVATE PROPERTY for reasons of permission to attach or erect decorations on their property and also for the purpose of maintaining goodwill if large items of décor adjoin particular business premises. This group must be made conscious of the fact that this is a very special occasion and requested to make concessions which will not be considered as a precedent for all time. Civic officials can help in this regard by granting special by-law relaxations if this is necessary.





## Consultations

Avant le parachèvement de tout projet, le Comité de décoration devra consulter :

1. Le Service des ingénieurs de la cité, ceci en vue d'établir la hauteur requise pour assurer le libre passage des véhicules et aussi afin d'éviter que des situations hasardeuses soient créées par la confusion possible des couleurs avec les signaux routiers et les divers panneaux de signalisation routière.
2. Les Services publics, afin d'avoir la certitude que les décorations ne se mêleront pas aux lignes électriques et téléphoniques, aux fils des trolleybus et afin de déterminer si la charge additionnelle peut être supportée par les poteaux dont on veut faire usage.
3. Le Service légal de la ville afin de s'assurer pour les dommages éventuels à la propriété et la responsabilité publique.
4. Les propriétaires d'édifices, pour obtenir l'autorisation d'attacher des décorations à leurs propriétés ou encore d'en ériger, et aussi en vue de leur collaboration si de grands motifs décoratifs sont contigus à des établissements commerciaux. Les propriétaires devront être conscients du caractère inédit et exceptionnel de la manifestation et requis de faire des concessions qui ne devront pas être considérées comme définitives pour l'avenir. L'autorité civile peut faciliter la tâche dans ce domaine en approuvant une réglementation moins rigide si nécessaire.



## Budget

Preferably the total decorations scheme should be prepared before the budget is set up and fixed. After the preliminary design has been completed, the committee should call in representatives of display firms, silk screeners, the City Electrician and any other department or trade which would be concerned with submitting tenders for fabrication or installation of decorations. These people can contribute valuable advice to the committee in giving an indication of what phases of the scheme they are best suited for, and also unit prices of various items. With unit prices the committee will be able to present a flexible and realistic budget to those in charge of finance. Cost items additional to fabrication of decorations will be design fees, construction and erection costs, maintenance costs, dismantling costs, and not to be forgotten public liability and property damage insurance. It should be a consideration of those responsible for the budget and also designers, to design items which will become permanent or reusable assets to the community and which can be used for subsequent schemes thus reducing costs of future décor. These items are those such as brackets for flags and banners, flag poles, pylon poles, flags themselves and other materials. Well-designed material will also have a value to the collector after their usefulness as a community decoration has passed. The experience in Vancouver has been that we have been able to dispose of, by sale, most of the banner decorations from each year. It is interesting to note at this time that the recipients of this material have included universities, art schools, and similar institutions in many different countries.



## Budget

L'ensemble du programme des décorations devrait être de préférence complété avant que le budget ne soit préparé et délimité. Une fois les esquisses préliminaires complétées, le comité devrait avoir recours aux représentants de firmes qui se spécialisent dans l'étalage, aux spécialistes en sérigraphie, aux électriciens et tout autre branche de commerce susceptible de présenter des soumissions pour la construction et le montage des décorations. Ces divers spécialistes peuvent aider le comité d'une façon appréciable en lui faisant connaître la partie de l'ensemble du programme qu'ils seraient le plus aptes à réaliser et en fournissant les prix unitaires des divers items que l'on se propose d'employer. La connaissance de ces prix unitaires permettra aux membres du comité de préparer à l'intention des responsables de la finance, un budget souple mais non moins réaliste. Au coût de la fabrication des décorations, on devra ajouter celui des honoraires des responsables de la conception, ceux de la construction, de l'érection, de l'entretien, du démantèlement sans oublier de coût de l'assurance responsabilité publique et dommages à la propriété. Les responsables du budget et aussi ceux de la conception devront considérer qu'il leur faudra accorder la préférence aux éléments de nature permanente ou pouvant servir en des circonstances subséquentes, diminuant ainsi le coût des décorations futures. Ces éléments consistent principalement en supports pour les drapeaux et bannières, mâts, pylônes, les drapeaux eux-mêmes, etc. Les éléments bien conçus représenteront une valeur pour les collectionneurs après leur usage par la ville. A Vancouver, l'expérience a démontré qu'il est possible de vendre chaque année, la plupart des bannières qui ont servi. A ce moment, il est intéressant de noter que, parmi ceux qui se sont procurés ces bannières, se retrouvent des universités, des écoles d'art et autres institutions semblables de plusieurs pays.







## Final Design and Fabrication Process

After approval has been received to proceed with fabrication and erection, the designers will be required to produce full size stencils, models, and other graphic information for the benefit of the fabricators. This information in essence is similar to the working drawings produced by an architect for the information of contractors. The designers will be working in collaboration with the city officials who must take responsibility for public safety, protection of municipally owned property, i.e. stress on light poles, clearances for moving traffic, pedestrians, parked cars, prevention of interference with various utilities, high tension lines, telephone wires, trolley bus wires, etc. Selections of materials must also be made during this stage and these will be chosen on the basis of colours available, strength, their colour-fast qualities, bearing in mind the long exposure of materials to sun, wind and rain.

It will be necessary for the designers to lay out their schemes in diagrammatic fashion in order that colour progression and coordination can be achieved. Here it is important to relate where possible to the predominant colour tone of areas, preferably by direct contrast to the general colour of the surroundings.

Specifications for all items shall be the responsibility of the decorations committee. These should describe the scope of the work, quality and type of materials, performance standards, and the various responsibilities of the fabricators.

If fabrication is to be done by professionals, the cost of the work should be determined by a legal tender. If the funds are to be provided by the municipality the civic purchasing department is the most suitable agency for the preparation and receipt of tenders. The tender must establish a production time table, methods of payment, guarantees, etc. Unit prices should be established and a percentage of over-production called for in the case of repetitive items so that replacements will be available in the event of storm damage, vandalism and accident.

## Conception finale et processus de fabrication

Une fois obtenue, l'approbation de procéder à la fabrication et à l'érection, les esthéticiens seront requis de préparer des stencils grandeur réelle, des modèles et autres présentations graphiques à l'intention des manufacturiers. Essentiellement, ce travail est identique aux plans préparés par un architecte pour l'information des entrepreneurs. Les esthéticiens travailleront alors en collaboration avec les représentants de la ville; ces derniers devront assumer la responsabilité de la sécurité publique, celle de la protection des propriétés de la ville, c'est-à-dire analyser les tensions sur les lampadaires, les espaces libres pour la circulation, véhicules et piétons, le stationnement, prévenir qu'elles n'entravent les services d'utilité publique, câbles à haute tension, fils téléphoniques, etc. C'est au cours de cette période qu'il faut procéder aux choix des matériaux, choix qui sera effectué en tenant compte des couleurs disponibles, de la résistance, en ayant à l'esprit que ces matériaux seront longuement exposés au soleil, au vent et à la pluie.

Les esthéticiens devront préparer des diagrammes à partir de leurs conceptions, ceci afin que soient réussies la progression et la coordination des couleurs. Là où c'est possible, il est important d'assortir à la couleur prédominante, les couleurs diverses d'un endroit donné, ceci soit par l'harmonie ou encore mieux par le contraste.

La préparation des devis de tous les articles incombe au Comité des décorations. Ces devis doivent indiquer l'étendue du travail, le genre et la qualité des matériaux, les normes de comportement, ainsi que les diverses responsabilités des fabricants.

Si la fabrication doit être confiée à des professionnels, le coût du travail devrait être déterminé par soumissions. Dans les cas où les fonds sont fournis par la municipalité, le service municipal des achats est l'organisme le mieux désigné pour la préparation et la réception des soumissions. Celles-ci doivent présenter un calendrier de la production, indiquer les méthodes de paiement, les garanties, etc. Dans le cas d'articles fabriqués en série, il y a lieu d'obtenir des prix unitaires et de demander un supplément de production afin d'avoir des articles de remplacement disponibles dans l'éventualité de dommages du fait de tempêtes, de vandalisme ou d'accidents.



## Timing and Duration

Local weather conditions will have to be given great consideration in making an assessment of the proper date to erect decorations, and the period of time for which they should remain in place. In order to gain impact they should be complete at a significant date and should be dismantled at the close of organized festivities. The authors' experience suggests that the period from Dominion Day to Labour Day is preferable. This period at least in Vancouver is usually free from high winds and rain storms which create hazards for banners or flags and other suspended material. Fabrics and colours which will withstand this long exposure without becoming excessively faded or weakened are readily available.

## Réglage et durée

On devra porter une attention toute spéciale aux conditions météorologiques régionales avant de déterminer la date la plus propice à l'érection des décorations, de même que pour délimiter la période pendant laquelle elles demeureront en place. Afin qu'elles gagnent en intérêt, la date pour compléter les décorations devrait coïncider avec un anniversaire important et leur démantèlement avec le jour qui marquera la clôture des festivités organisées. Selon les auteurs de ce fascicule, la période la plus propice se situe entre le jour de la Confédération et la fête du Travail. Au cours de ce laps de temps, Vancouver et sa région sont généralement épargnées par les grands vents, la pluie et les tempêtes, lesquels peuvent détériorer les bannières, les drapeaux ainsi que les dispositifs suspendus. On peut se procurer facilement les tissus et les couleurs qui résistent à une longue exposition au soleil.



## Tests

The importance of performance tests cannot be overstressed. Full size samples should be erected in the decided locations of the scheme or in a situation where the same conditions can be simulated. If possible the sample should be erected for an entire season prior to the celebration in order that the full seasonal effect of sun, wind and rain can be observed. Samples can be modified in order to improve the design as indicated by the influence of those elements which affect them. Full scale samples will also give to the designers an impression of their proposals and will enable them to make the most of colour, silhouette effects, movements, lighting, etc.

## Essais

L'importance des essais ne doit pas être minimisée. Des échantillons pleine grandeur devraient être érigés aux endroits définis sur le plan ou en des sites où des conditions analogues peuvent être simulées. Si possible, ces échantillons devraient être installés durant une saison entière avant les célébrations, afin que les actions combinées du soleil, du vent et de la pluie puissent être observées. En vue d'améliorer leur conception, on peut modifier ces échantillons selon leur comportement au cours d'essais, et ce, selon l'influence des éléments sur leur résistance. Les échantillons grandeur réelle, permettront aux esthéticiens de constater la réalisation de leurs conceptions et leur fourniront l'opportunité de tirer le meilleur parti des effets de couleurs, de silhouettes, de mouvements, de lumières, etc.





## Installation and Maintenance

Perhaps the most suitable agency for the tasks of installation and maintenance of décor are the various components of the City Engineering Department. The Electrical Department is particularly suited for installation of all types of hanging decoration due to their familiarity with light and power poles, their sizes, ability to withstand stresses, location and because of the type of vehicles and personnel in this department. In Vancouver the electrical engineer has always been a member of the decorations committee.

## Montage et entretien

Il est possible que l'agent le mieux qualifié pour l'installation et l'entretien des décorations soit constitué des divers départements des services techniques de la cité. L'installation de tous les genres de décorations suspendues conviendrait particulièrement au service de l'électricité car il est nécessairement familier avec les luminaires, lampadaires, poteaux soutenant les fils électriques, leurs dimensions, leur résistance, leur emplacement et aussi en raison de la compétence du personnel et du genre de véhicule en usage dans ce département. A Vancouver, un ingénieur en électricité a toujours été membre du Comité de décoration.





### Private Residences

Homeowners should be asked to decorate either by a display of flags, floodlighting or purchase of décor designed by the decorations committee. An effort in this direction will do much towards the creation of an air of occasion and festivity which are the main ingredients of a successful decorations scheme.

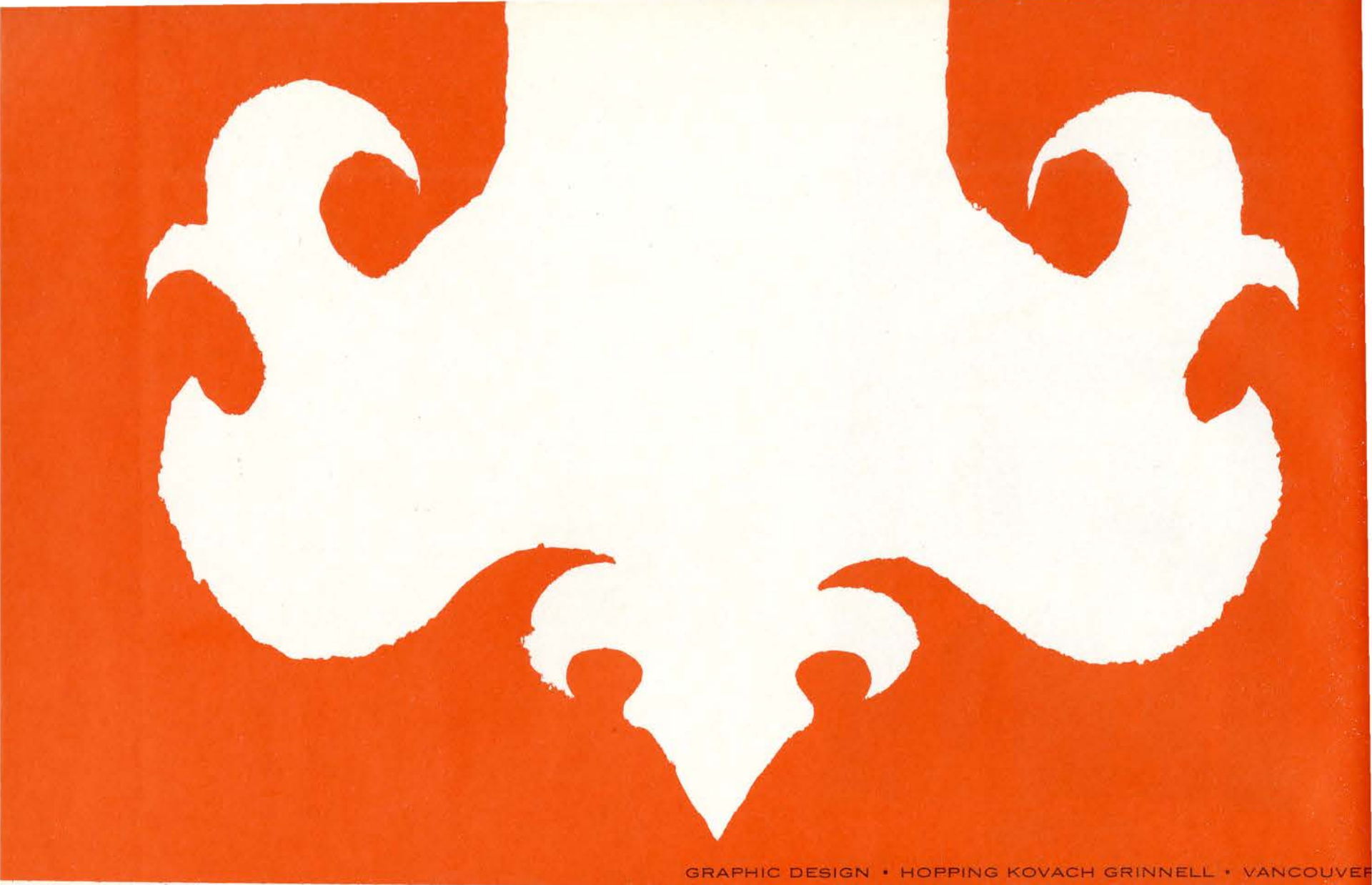
A worthwhile promotion of the decorations committee would be to encourage the purchase of flags or banners and by means of mass buying reduce costs of these items. Perhaps this would be a suitable project for an organization such as the Junior Chamber of Commerce.

### Résidences privées

Les propriétaires de résidences devraient être invités à décorer, soit par un étalage de drapeaux, par des projecteurs ou par l'achat de divers autres éléments conçus par le Comité de décorations. Un effort en ce sens favorisera la création d'une ambiance propice et d'un air de festivité, principaux facteurs à la base de toute réussite d'un programme de décorations.

Encourager l'achat de drapeaux et de bannières constituerait, pour le Comité de décorations, une initiative valable, laquelle pourrait entraîner une baisse du coût de revient en raison d'achats en grandes quantités. Cette promotion pourrait peut-être relever de la compétence de la Jeune Chambre locale ou d'un organisme semblable.





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## Other Years

There is no doubt that a City or Town can be dressed up so to speak with well-designed and colourful decorations. Vancouver now has a tradition of decorations on Georgia Street each summer. This major thoroughfare is used by both citizens and visitors daily and the trees planted in 1958 plus the decorations convey an air of delight appreciated by all. It is suggested therefore that when decorations are installed that the fastenings, brackets, etc., be designed for permanence and ease of erection so that they remain as an asset for the community for re-use every year.

## Années subséquentes

Il est évident qu'une ville peut être pour ainsi dire revêtue de décorations bien conçues et riches en couleurs. Chaque été à Vancouver, la rue Georgia est décorée, c'est maintenant une tradition. Cette importante artère est empruntée quotidiennement par les citoyens et par les visiteurs ; les arbres plantés en 1958 auxquels s'ajoutent les décorations donnent un air de réjouissance unanimement apprécié. Conséquemment, il est suggéré que les attaches, crochets, etc. soient fabriqués en fonction d'un usage permanent des décorations afin qu'elles demeurent un actif pour la communauté permettant leur réutilisation annuelle.



CANADIAN

# BUILDING DIGEST

DIVISION OF BUILDING RESEARCH • NATIONAL RESEARCH COUNCIL



## Wind Pressures and Suctions on Roofs

by W. A. Dalgliesh and W. R. Schriever

UDC 624.042:69.024

Although the dangers of damage to roofs from hurricane winds are vaguely appreciated by most people, the nature and distribution of wind forces are not generally understood. The subject is complicated and some understanding of air flow around buildings is required as a basis for sound roof design. It is the purpose of this Digest to assist the reader in acquiring this understanding.

By looking at the most striking effects of wind on roofs — damage caused by very high winds — three lessons can be learned.

1. Entire roofs are often lifted off a building: wind must exert strong lifting forces rather than pressures on roofs.
2. Damage is frequently confined to small sections near corners and ridges: the distribution of wind forces must be non-uniform, with extremes in certain areas.
3. Damage is sometimes limited to the roof covering proper — shingles or built-up roofing — rather than to the roof assembly as a whole: a pressure differential must exist across the roofing membrane alone rather than across the assembly.

Positive wind pressure, in the sense of a downward roof load, is almost never the cause of a failure. Even if there are occasional downward wind loads, roofs in Canada are normally well designed to carry downward loads from snow.

Structural damage from very strong (and fortunately relatively rare) winds is the most obvious effect of wind on roofs, but even moderate winds are important in the over-all picture. The movement of air through roof spaces must also be considered. The same wind-induced pressure distributions that cause structural loading also cause air to flow, even at moderate wind speeds, from regions of higher to regions of lower pressure if openings exist either intentionally or accidentally. The wind factor must, therefore, be taken into account in planning the size and location of ventilation openings. A difference may be, of course, that at low wind speeds building pressurization by mechanical equipment and, in winter, chimney effect can cause pressure differentials of the same order of magnitude as those produced by wind. In principle, however, it is best to put exhausts in areas of continuous suction (independent of wind direction).

### Pressure Distribution on Roofs

It should be noted that although the *magnitudes* of the pressures and suctions are proportional to the square of the wind speed, the *distribution* of pressures and suctions does *not* change with speed for most "sharp-edged" structures and buildings. The pressure distributions can readily be expressed independent of wind speed by dividing the wind-induced pressures by the "stagnation pressure",  $\frac{1}{2} \rho v^2$ , where  $\rho$  is the air density and  $v$  is the wind speed.

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The stagnation pressure represents the total kinetic energy of the wind and is used as the basic design pressure. It is the pressure obtained on a surface perpendicular to the wind that makes the wind "stagnate" completely. To obtain the actual wind pressures or suction on a surface the stagnation pressure is multiplied by pressure coefficients or shape factors appropriate to any given building surface. Pressures and suction are measured relative to the barometric pressure of the undisturbed flow, which is given the value zero. Although the pressure distribution is far from uniform, average pressure coefficients for entire roof and wall surfaces are used to simplify the design problem.

Pressure coefficients for particular building shapes such as those contained in Supplement No. 3 to the National Building Code have been derived from wind tunnel tests on small-scale models. Meteorological data are naturally also required to supply the necessary design wind speeds for a specific geographical location. Finally, site investigations are sometimes desirable to allow an assessment of the probable sheltering or funnelling effects of neighbouring structures on the building to be designed.

Roof design for wind effects, then, appears to be a formidable task requiring the collaboration of three different specialists. Although it is true that the designer would be poorly equipped without the help of technical data, he is still responsible for applying information to arrive at the design of the roof. Sometimes what he needs is unavailable or only obtainable through *ad hoc* wind tunnel tests, but in any case the designer's task will be much easier if he has a good basic understanding of how pressure distributions are formed on buildings, and when and where to expect potentially serious conditions.

### Basic Ideas

Figure 1 illustrates the simplest case of a "sharp-edged" obstruction to air flow over the ground. The obstruction is an infinitely long wall so that the flow is two-dimensional. The wall changes the momentum of the flow by pushing the streamlines upwards, and this creates a positive pressure on the wall. In Figure 1 there is a triangular vortex region in front of the wall in which the "trapped air" is under

positive pressure compared with the pressure in the undisturbed flow.

The streamlines, in addition to showing the direction of flow, indicate changes in speed; the closer they are crowded together, the greater is the speed at that section because the same amount of fluid must pass between two streamlines at any section. The pressure at any point in streamlined flow can be computed from the speed because the total energy, which is the sum of velocity energy and pressure energy, is constant.

The mathematical relations between velocities from point to point and the constancy of total energy can be applied to give the pressure distribution only if the flow is divided into a streamline zone and a turbulent zone containing the obstruction. If the obstruction were itself streamlined in shape, the streamlines could follow its surfaces and vortex regions would not form.

The shape of the boundary separating the vortex regions from the streamlined flow must be known before velocities and pressures can be calculated, although in fact the exact shape is usually not known. In practice, pressure distributions on sharp-edged shapes are found by experiment on scale models in a wind tunnel rather than by mathematical analysis. These ideas have been presented, not to enable one to compute pressure distributions, but to give a qualitative picture of wind flow around buildings that will help the understanding of pressure distributions found from wind tunnel tests.

One final hint in applying these basic ideas will be useful in visualizing where pressures and suction occur: wherever the boundary of streamline flow is pushed up, pressure occurs; and wherever it curves back, suction occurs. The sharper the curvature of the boundary, the greater the pressure or suction will be.

### Application of Basic Ideas

Despite the actual shape of the obstruction to flow (a right-angled projection into the flow path), it may be seen in Figure 1 that the streamlines are deformed just as if the obstruction were shaped like a smooth hump. The deficiencies of "streamlining" are made up by the formation of a positive vortex region in front and a larger, negative vortex region behind.



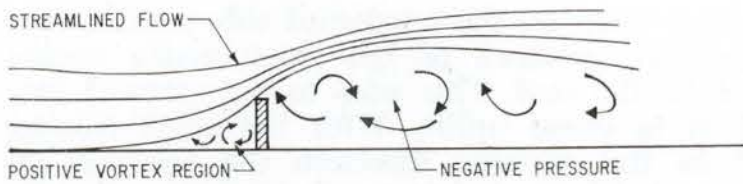


Figure 1 Wind flow over a long wall.

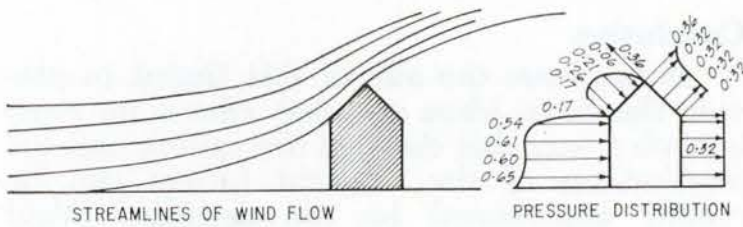


Figure 2 Two-dimensional wind flow over a building (after Jensen).

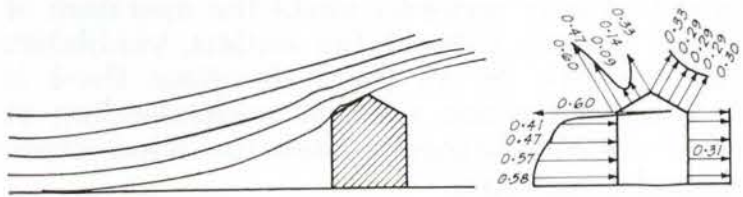


Figure 3 Separation at eave causing high suction (after Jensen).

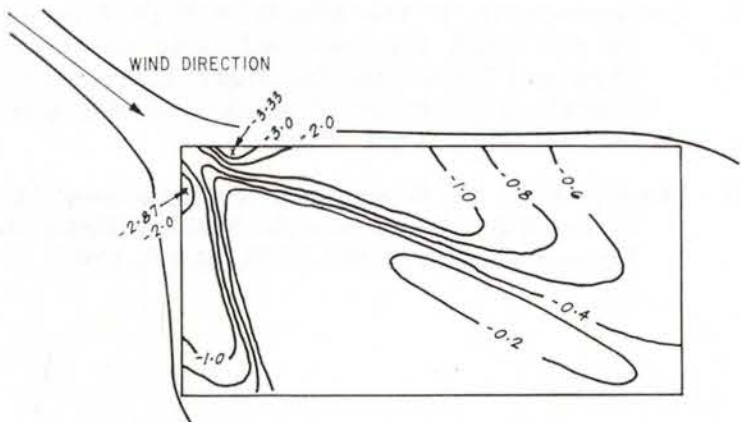


Figure 4 Plan view of roof with negative pressure distribution shown by contour lines (after Leutheusser).

Figure 2 shows a complete building (still in two-dimensional flow) in which the roof is steep enough to protrude into the flow boundary formed by the front wall alone. This causes the streamlined flow to be pushed up even further, so that pressure occurs on the windward slope. If the slope of the roof is reduced, a point will be reached at which pressure on the windward slope becomes zero; if it is reduced further, the flow boundary will at first be sucked down and will continue to flow along the slope, and a change from pressure to suction will occur. As the slope is reduced even further, high local suctions will develop near the eave, and a third vortex region, highly negative, will suddenly form, as is shown in Figure 3.

At a critical slope angle, maximum suctions occur; with further reduction there will be an easing of the suction, when the small vortex will merge with the larger "wake" of the building. The whole roof is then completely immersed in a region of fairly uniform, moderate suction, and further changes in the slope or shape within that region will not greatly affect the pressures.

### Adding the Third Dimension

In three dimensions the streamline flow is diverted around the sides as well as over the top, with separation at sharp edges and the possibility of re-attachment to the side walls at certain orientations of the wind. The important parameters in determining the shape of the flow are the ratios of height to width and width to length of the building. For example, the critical roof slope for maximum roof suction (flow at right angles to the eaves) on a building 100 feet wide and 250 feet long is 5 degrees for a height of 12 feet, 20 degrees for a height of 100 feet, and 30 degrees for a height of 200 feet.

The greatest local suctions occur, especially with long, low-slope roofs, near the windward corner when the wind blows at an angle of 45 to 50 degrees to the eave. This is shown in plan view on Figure 4, where the lines of equal pressure are plotted as contours. Peak suctions up to  $-4.0$  times the stagnation pressure of the wind may occur close to a corner, because a strong negative vortex is formed at the corner as the flow curves up and over the two windward walls and separates at the sharp edge. When the roof is long, the flow can be



sucked back down to re-attach itself to the roof surface, so that the vortex region is effectively sealed off on all sides, preventing any reverse flow along the roof to relieve the high suction.

### Parapets

Simple roofs without parapets or overhangs have so far been considered in this Digest. Such roof elements, however, have a considerable effect on pressure distribution. Recent model tests at the University of Toronto show that parapets can help to reduce the high local suctions just described. If it is of the proper height, a parapet can lift the flow and the separation lines high enough to prevent their re-attachment to the roof surface, so that one large vortex region forms to "absorb" the small, tightly sealed one.

If the parapet is too low, on the other hand, the local suctions can be even worse. An empirical formula has been derived from model tests at the University of Toronto that enables the parapet wall height to be chosen as a function of the dimensions of the building. For example, a building 50 feet wide, 100 feet long, and 25 feet high needs a parapet wall 5 feet high to reduce local suction maxima from  $-3.3$  to  $-1.2$ .

### Internal Pressures

The internal pressure of the building has been tacitly assumed equal to the barometric pressure in the undisturbed flow, the reference datum or "zero" pressure. This will be true, however, only if the building is tightly sealed or if the distribution of "leaks" is fairly uniform, with the right proportion in pressure regions and suction regions. If openings predominate in a suction region, the internal pressure will tend toward suction, and if the openings are mostly on the windward side, the internal pressure will be positive.

The importance of internal pressure, whether positive or negative, to the resultant uplift forces on the roof is apparent. To take an extreme case, an airport hangar with huge

doors open on the windward side receives the positive pressure of the front vortex region under the roof. This adds to the external suction to cause uplift. With the wind coming from the opposite direction the effect is reversed. Thus wind from all directions must be considered in design, although obviously the critical case for uplift is with pressure inside. One should be clear as to which element of the roof is actually experiencing the pressure differential. If the air-tight element is not also the load-bearing element, trouble may arise.

### Conclusion

It has been the aim of this Digest to present the basic ideas of wind effects on roofs in such a way that detailed discussions and the implications of the relevant factors can be readily appreciated by the designer. Wind loads in Canada, except for tornadoes, do not present especially difficult problems for the successful design of roofs, but the basic nature of the phenomenon must be understood. It should also be recalled that even when the wind is not blowing strongly enough to cause serious structural loads, suctions and pressures exist that may seriously affect the operation of a roof system, exhaust fan outlets, ventilators and the like. In all these situations there is nothing to replace a sound understanding of what actually happens when the wind blows around a building.

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# Principles Underlying the Bestowal of Fellowships



Four years ago the College of Fellows instituted a study of possible improvements to the procedures for the nomination and election of new Fellows. The Officers of the College, along with a group of senior Fellows under the Chairmanship of Mr. Earle Morgan, Dean of the College, put forward certain recommendations for improvements and these recommendations were accepted at the Business Meeting of the College held in Hamilton, May 18, 1963.

For the information of all members of the Royal Architectural Institute of Canada we herewith publish the two chief documents which implement these new procedures. One document outlines the procedures for nomination and election and the other document sets forth the Principles Underlying the Bestowal of Fellowships. New Nomination Forms are in use and may be obtained on application to Mr. Maurice Holdham, Executive Secretary of the Institute.

*Harland Steele, Chancellor, College of Fellows.*

Fellowship is the highest honour the Royal Architectural Institute of Canada can bestow upon a member. To guard and further the prestige of the College, to observe the pledge of high professional conduct and service, and to assume full responsibility in maintaining the highest standard of the profession is the duty and obligation of every member of the College of Fellows.

The constant goal of improvement in the architectural profession in Canada is the principal objective of the RAIC College of Fellows. By recognizing the good works of our members who contribute most to the profession, we stimulate others to improve and so deserve equal awards. Recognition must be truly deserved or the objective of the College is destroyed.

A member of the RAIC who is over thirty-five years of age and has achieved professional eminence or rendered distinctive service to the profession is eligible for nomination to Fellowship. He must have proper qualifications under one, or more, of the following categories: design; science of construction; service to the Institute; public service; education or literature. The total membership of the College must never be over eight per cent of the total Institute membership and proper qualifications, regardless of locality or other influences, are the only criteria for election to the College.

To guard and improve the prestige of the College, the procedure for nominations has been enlarged and revised. The work of the Nominating Committees and the Screening Committee is to ensure that unworthy candidates are not elected and worthy candidates are not overlooked. Proposers should feel quite certain that nominees' achievements have sufficient distinction to make them notable contributors to the advancement of the profession and of architecture and should remember that the personality and popularity of a member does not of itself constitute a notable contribution; nor is Fellowship necessarily an award for the nominee's industry and success.

Letters attesting to intimate knowledge of the good works and character of nominees are required from each of the five proposers.



# Procedure for the Nomination and Election of Fellows

"A member of the RAIC who is over thirty-five years of age and who has achieved professional eminence, or rendered distinctive service to the profession shall be eligible for nomination to Fellowship."

Any five Fellows may nominate, using the prescribed printed form which may be obtained on application to the RAIC Executive Secretary, and each nominator must write a letter addressed to the Chairman of the Screening Committee, attesting to the qualifications of the nominee. All letters by nominators must be sealed. The nominating form and sealed letters are to be submitted, through the RAIC Executive Secretary, to the Chairman of the local committee before October 15th of each year.

The Chancellor shall appoint a Chairman of a local committee for each provincial association who shall choose a committee of one to six members to initiate and/or receive nominations for Fellowship in that association. Nominators for any nominee may reside in any province in Canada. Members of the Screening Committee may not nominate or be members of a local committee.

Each Committee Chairman shall forward all documents, including the required sealed letters of nominators, to the RAIC Executive Secretary before November 1st and shall also forward a complete report of his Committee deliberations for submission to the Screening Committee. The report must include a list of all candidates initiated and considered by the Committee, with reasons why those considered but not nominated were omitted. Where nominations have been received and not initiated by a local committee the report is to recommend approval or give reasons for not recommending approval of received nominations.

Not later than February 1st, a list of all proposed nominees shall be sent to all Fellows with notice that if any Fellow objects to any name he must write a confidential letter, stating the reasons for his objections, to the Screening Committee before February 15th. The Screening Committee shall act on any such letters entirely at their discretion.

The Screening Committee will consist of the RAIC President, the Vice-President, the Chancellor, and the Dean of the College of Fellows. It shall consider all nominations submitted, and have the power to accept, reject, or postpone them; thus advising the Chancellor. The Screening Committee shall also recommend Honorary Fellowships and Corresponding Members. They shall meet for this purpose sometime between November 1st and February 1st and confer again between February 15th and March 1st to confirm final recommendations.

The Chancellor shall receive the final list of recommended nominees from the Screening Committee, not later than March 1st, for his presentation to the Executive Committee.

Only Executive Committee members who are Fellows shall meet with the Chancellor to consider the list of nominations and elect new Fellows, accepting or rejecting the Chancellor's recommendations but having no power to add new names or replace rejected nominees. Election will take place at the first meeting of the Executive Committee after March 1st.

The Registrar will send letters to Fellows-elect, advising them of their election, asking them to fill out a "form of consent", and inviting them to attend the convocation ceremony at the next RAIC Assembly.

The Chancellor will write congratulatory letters to Fellows-elect after they have returned the "form of consent".

The Registrar will compose a notice for the *Journal*, naming the newly elected Fellows with reasons for their election, to be published in the first issue following convocation. This notice will be approved by the Chancellor before submission to the *Journal*.



# Principes Régissant l'Admission des Agrégés



Il y a quatre ans, le Collège des Agrégés étudiait divers moyens d'améliorer les modalités visant la mise en candidature et l'admission de nouveaux membres. Les dirigeants, ainsi qu'un certain nombre de membres en vue du Collège, sous la présidence du doyen, M. Earle Morgan, ont recommandé, en ce sens, certaines règles de procédure qui ont été acceptées par le Collège à sa réunion d'affaires à Hamilton, le 18 mai 1963.

Pour la gouverner de tous les membres de l'Institut Royal d'Architecture du Canada, nous publions, avec la présente, les deux documents principaux mettant en oeuvre les nouvelles modalités. Le premier de ces documents expose la méthode à suivre pour la mise en candidature et l'acceptation des nouveaux membres et le second, les principes qui régissent l'admission des nouveaux membres du Collège. On peut se procurer la nouvelle formule de mise en candidature, en en faisant la demande à M. Maurice Holdham, secrétaire exécutif de l'Institut.

*Le chancelier du Collège des Agrégés, Harland Steele.*

Le titre d'Agrégé est le plus grand honneur que l'Institut Royal d'Architecture du Canada peut conférer à un de ses membres. Chaque membre du Collège des Agrégés a pour devoir et obligation de sauvegarder le prestige du Collège et de travailler à augmenter son rayonnement, de respecter son engagement quant à la haute qualité professionnelle de sa conduite et de ses services et d'assumer pleine et entière responsabilité en ce qui a trait au maintien des plus hautes normes de la profession.

L'objectif du Collège des Agrégés de l'IRAC est l'amélioration constante de la profession d'architecte au Canada. En reconnaissant le bon travail de nos membres qui contribuent le plus à la profession, nous encourageons les autres à s'améliorer et à mériter ainsi le même honneur. Toutefois, cet honneur doit être véritablement mérité, sans quoi le Collège manque son but. Tout membre de l'IRAC âgé de plus de 35 ans, qui s'est distingué dans l'exercice de sa profession ou a rendu à celle-ci des services signalés, peut être proposé comme membre du Collège des Agrégés. Il doit posséder les qualités requises sous l'un ou plusieurs des chefs suivants: composition, science de la construction, services à l'Institut, civisme, enseignement et littérature. Le nombre des membres du Collège ne doit jamais dépasser 8% de l'effectif global de l'Institut et le mérite est, à l'exclusion de l'endroit de résidence et de toutes autres influences, le seul critère d'admission.

Afin de sauvegarder et de relever le prestige du Collège, on a révisé et élargi le processus de présentation des candidats. Les fonctions des Comités locaux et du Comité de sélection consistent à empêcher que des candidats non méritants soient acceptés et que des candidats méritants soient oubliés.

Les proposeurs doivent s'assurer que leurs candidats se sont suffisamment distingués pour constituer une contribution notoire à l'avancement de la profession et de l'architecture, et, se rappeler qu'en soi la personnalité et la popularité ne sont pas des contributions notoires; en outre, le titre de membre agrégé ne constitue pas nécessairement une récompense pour le travail ou les succès d'un membre.

Chaque candidature doit être appuyée par une lettre de chacun des cinq proposeurs, attestant qu'il connaît personnellement le bon travail et la bonne réputation du candidat en cause.



# Règles Visant la Mise en Candidature et l'Admission de Membres

"Tout membre de l'IRAC âgé de plus de 35 ans, s'est distingué dans l'exercice de sa profession ou lui a rendu des services signalés, peut être proposé comme membre du Collège des Agrégés."

Cinq membres du Collège peuvent proposer un candidat, au moyen de la formule imprimée réglementaire, qu'on peut obtenir en en faisant la demande au secrétaire exécutif de l'IRAC. Chacun des cinq proposeurs doit adresser une lettre au président du comité de sélection, attestant les qualités du candidat. Toutes les lettres des proposeurs doivent parvenir à destination, bien scellées. La formule de proposition et les lettres scellées doivent être soumises par l'entremise du secrétaire exécutif de l'IRAC, au président du comité local, avant le 15 octobre de chaque année.

Le Chancelier nomme le président d'un comité local pour chaque Association provinciale. Ce président choisit de 1 à 6 membres pour former son comité dont les fonctions consistent à recevoir et (ou) proposer de son propre chef des candidatures au titre d'Agrégé parmi les membres de cette Association. Les proposeurs d'un candidat peuvent être résidents de n'importe quelle province du Canada. Les membres du comité de sélection ne peuvent agir comme proposeurs, n'y être membres du comité local.

Chaque président de comité local doit faire parvenir tous les documents, y compris les enveloppes scellées des proposeurs, au secrétaire exécutif de l'IRAC, avant le 1er novembre. Il devra, aussi faire parvenir un procès verbal complet des délibérations du comité. Le tout sera ensuite transmis au Comité de sélection. Le procès verbal devra comprendre une liste de tous les membres dont la candidature a été proposée et considérée par le comité, en y ajoutant les motifs qui ont incité le refus de ceux dont les noms ont été proposés mais non recommandés; Il devra inclure, de plus, les recommandations motivées, faites au Comité de sélection, favorables ou défavorables, à l'égard des candidatures qui n'auront pas été proposées par le comité local.

Au plus tard le 1er février, la liste des candidats proposés est envoyée à tous les Agrégés avec une note leur demandant de bien vouloir aviser le Comité de Sélection, avant le 15 février, au moyen d'une lettre confidentielle de leur opposition à tout candidat recommandé, en donnant les motifs qui justifient cette opposition. Le Comité de sélection a entière discrétion quant à la suite à donner à toute lettre de ce genre.

Au plus tard le 1er mars, le Comité de sélection fait parvenir la liste définitive des candidats recommandés au chancelier afin que celui-ci la présente au Comité exécutif.

Seuls les membres du Comité exécutif qui sont également membres du Collège des Agrégés ont le droit de siéger avec le chancelier pour l'étude des candidatures et l'acceptation de nouveaux Agrégés. Ils peuvent confirmer ou rejeter les recommandations du chancelier mais ils n'ont pas le pouvoir d'ajouter de nouveaux noms ni de rétablir des noms rayés. (Première réunion au Comité exécutif après le 1er mars.)

Le secrétaire-archiviste envoie aux candidats choisis une lettre les avisant de leur candidature et leur demandant de bien vouloir remplir la "formule d'acceptation" et les invitant à assister à la cérémonie d'investiture à la prochaine assemblée.

Le chancelier adresse une lettre de félicitations aux futurs membres dès qu'il a reçu d'eux leur "formule d'acceptation".

Le secrétaire-archiviste envoie aux candidats choisis une lettre les avisant de leur candidature après l'investiture, un avis contenant la liste des membres choisis et les raisons qui ont motivé ce choix. Cet avis doit être approuvé par le chancelier avant d'être envoyé au Journal.





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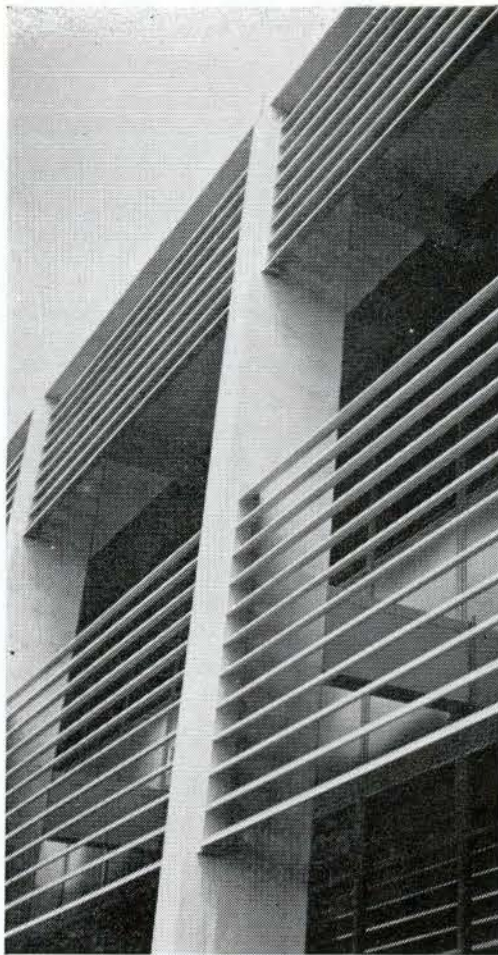
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**SELECTION CHART**

MODEL	CAPACITY (GPH)	HEIGHT (IN)	DEPTH (IN)	WIDTH (IN)	COOLING CAPACITY (BTU/H)	COOLING CAPACITY (GALLONS/HR)
HWTA-6	6.0	33	14	14	1,000	1.0
HWTA-8	8.0	33	14	14	1,300	1.3
HWTA-10W	10.0	33	14	14	1,600	1.6
HWTA-12	12.0	33	14	14	1,900	1.9
HWTA-15	15.0	33	14	14	2,200	2.2
HWTA-17W	17.0	33	14	14	2,500	2.5

\*Please Note: Figures are based on ambient temperature of 70°F. Capacity will vary with ambient temperature. Please consult Haws for details.

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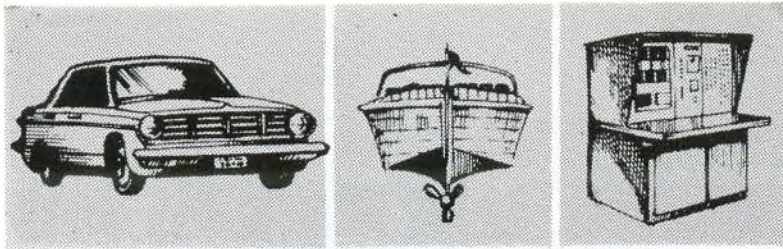
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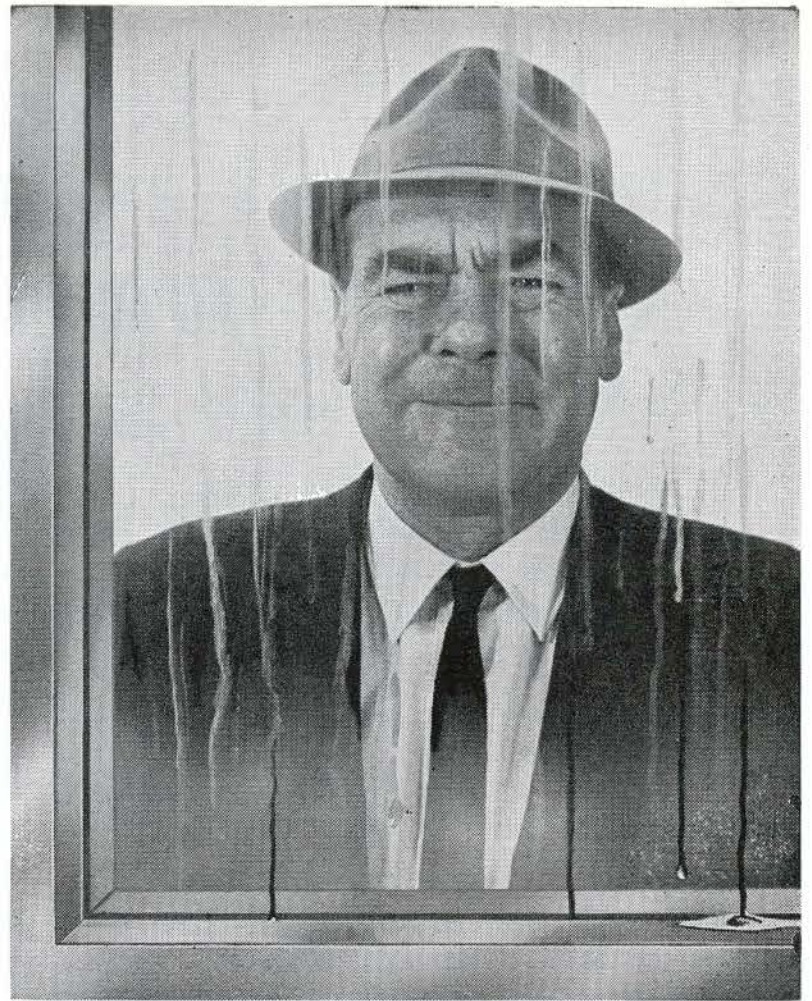
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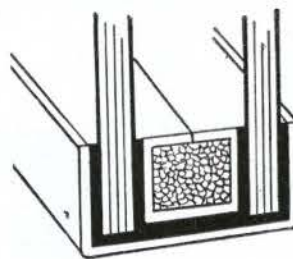
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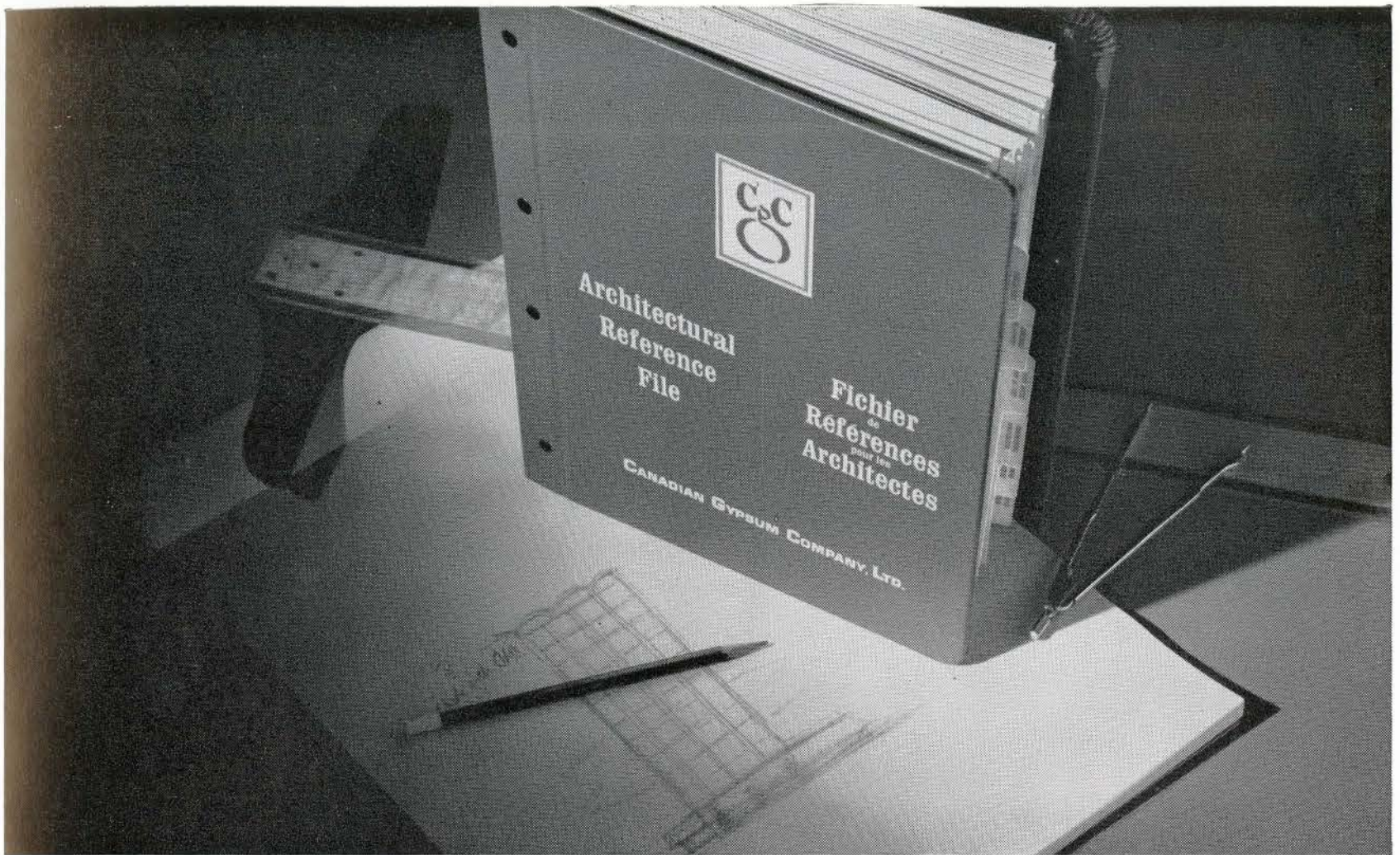
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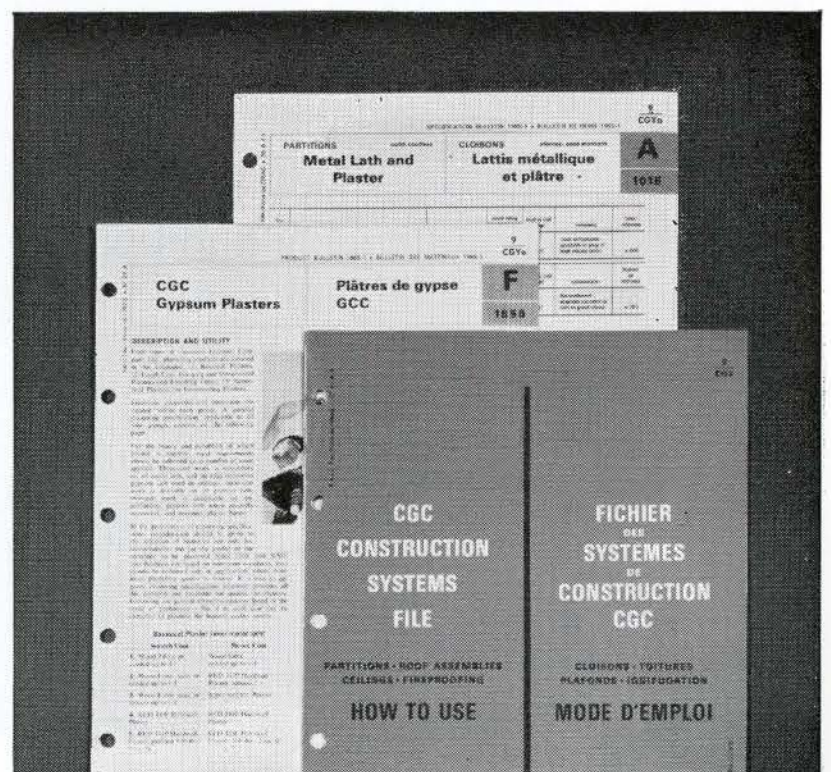
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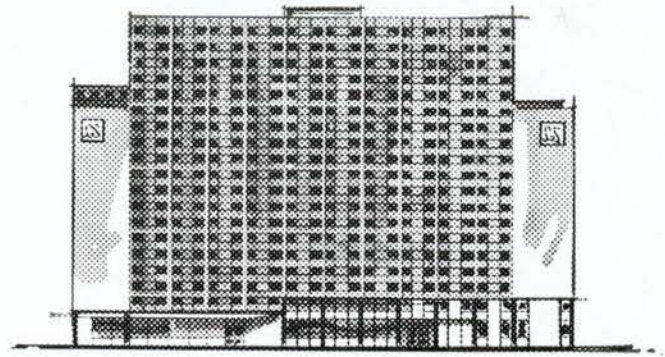
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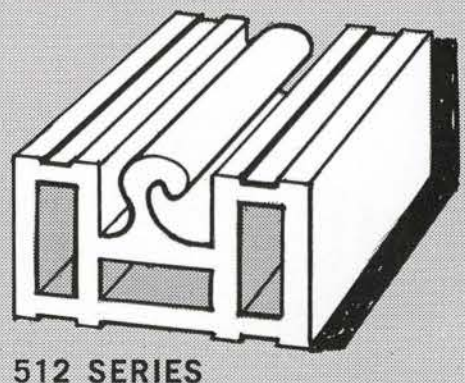
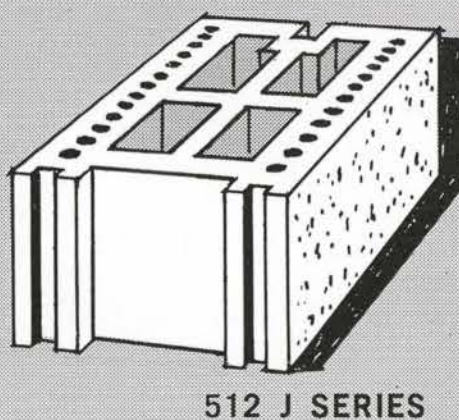
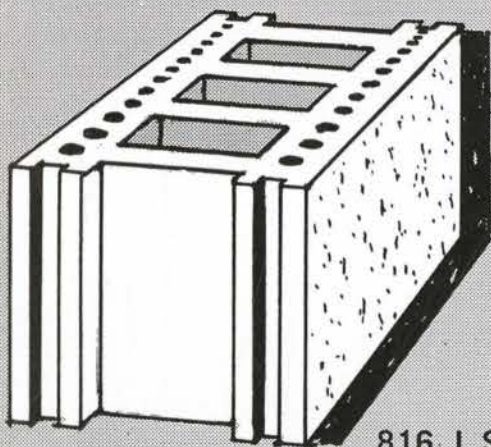
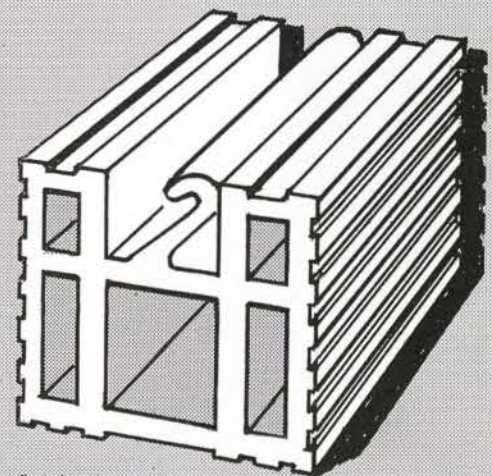
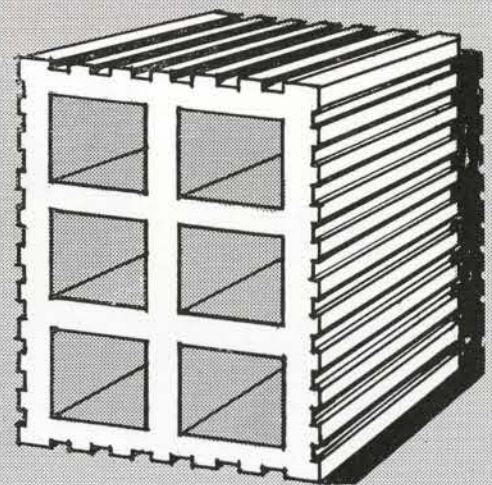


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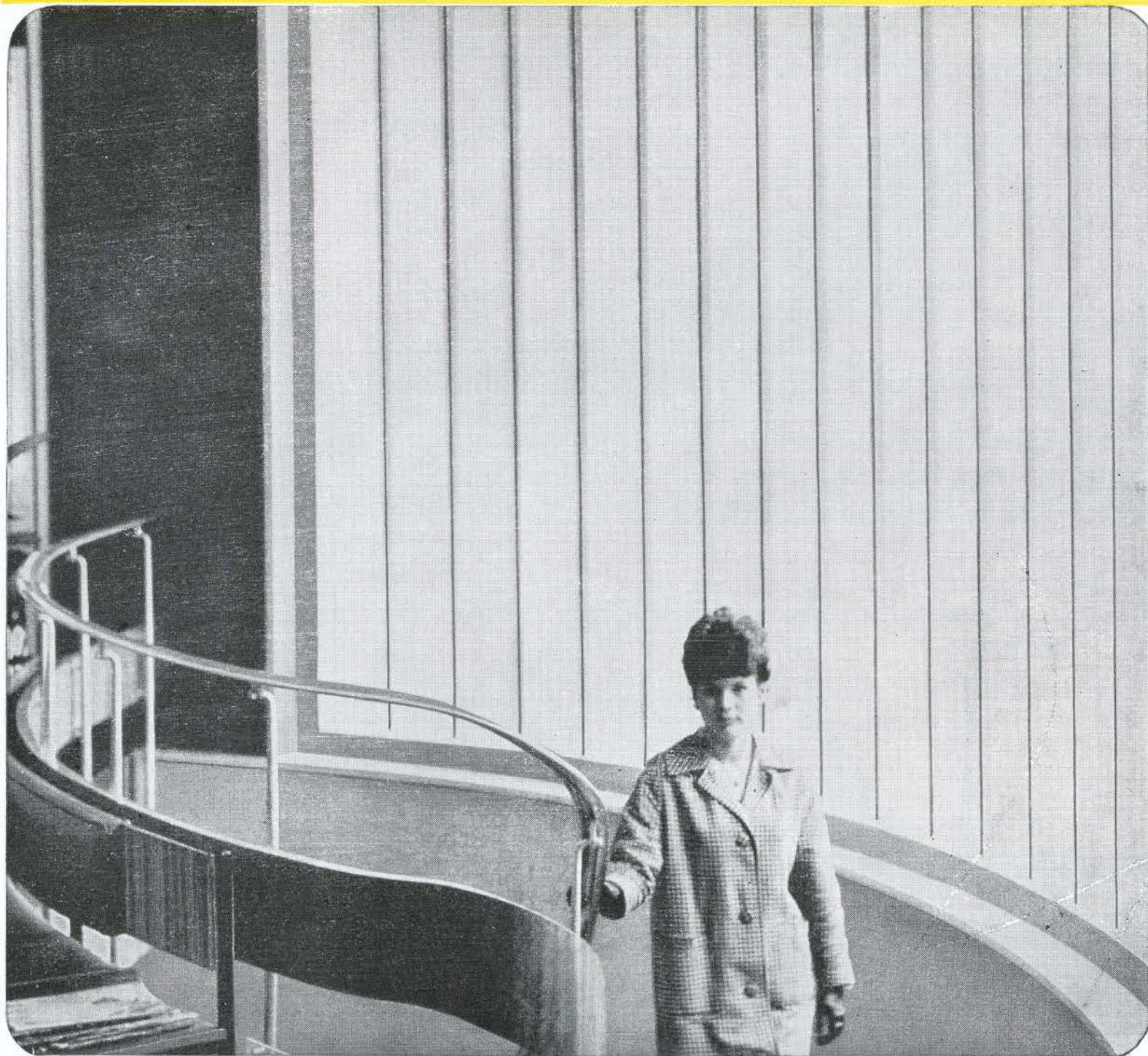
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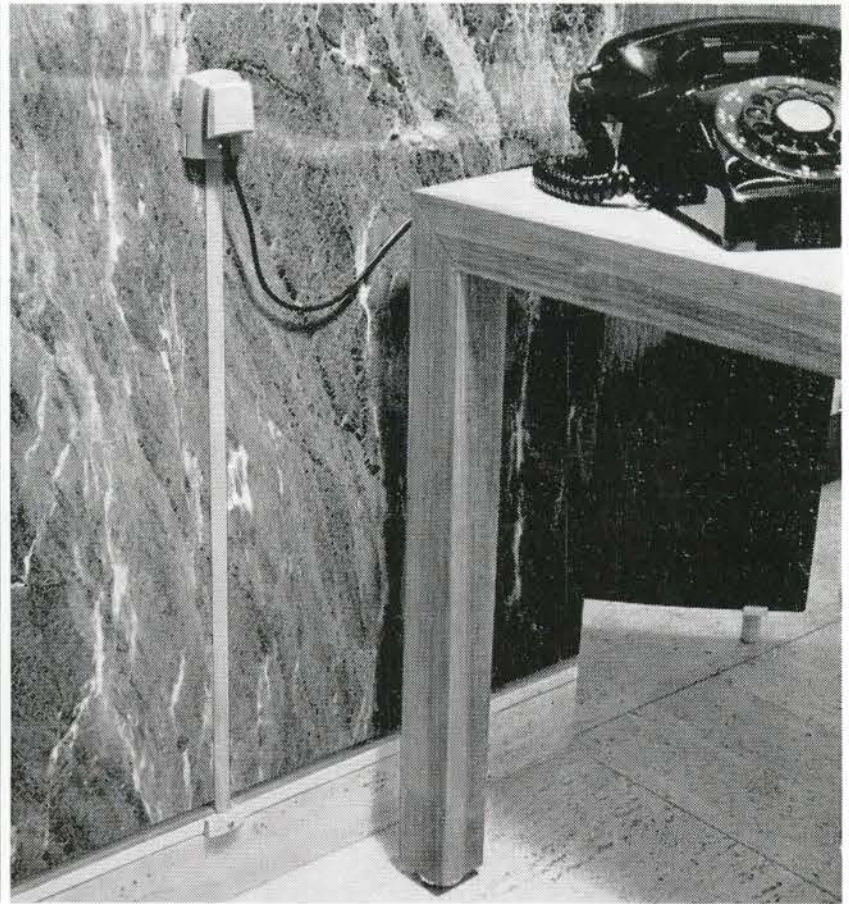
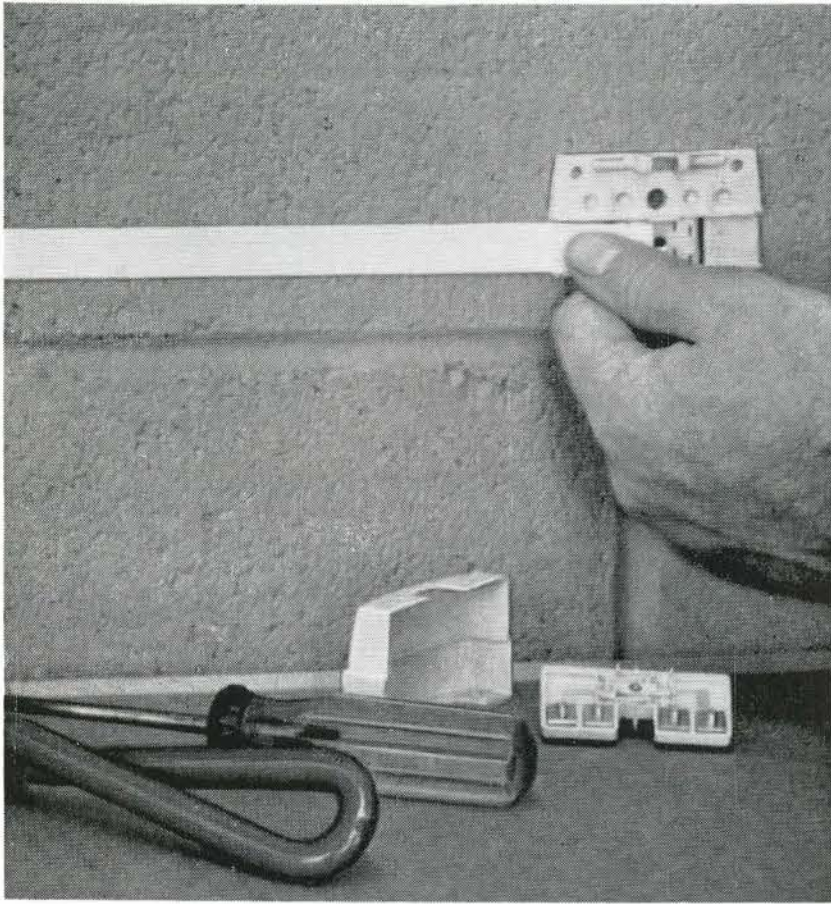
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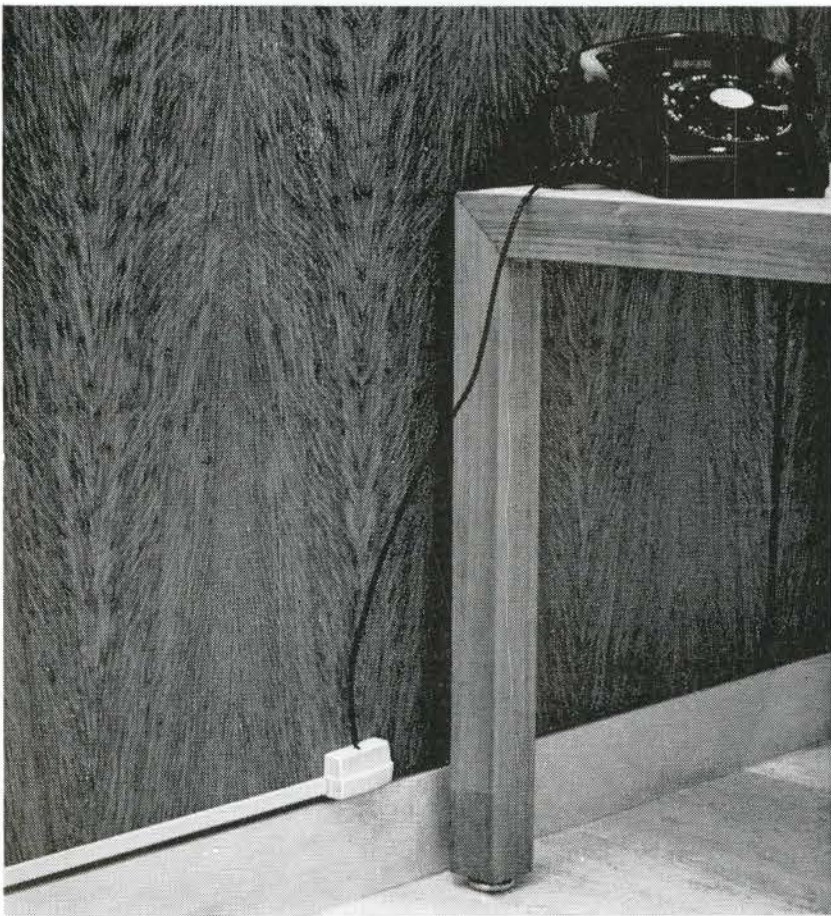
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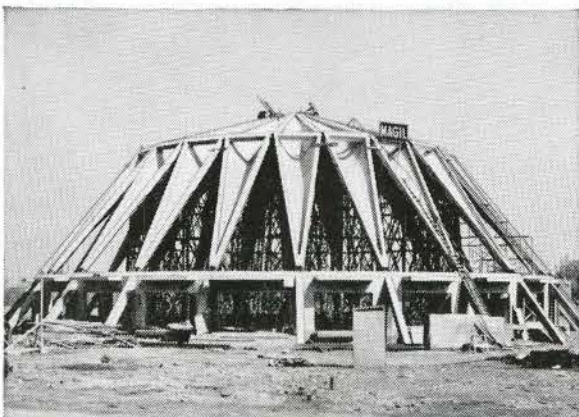
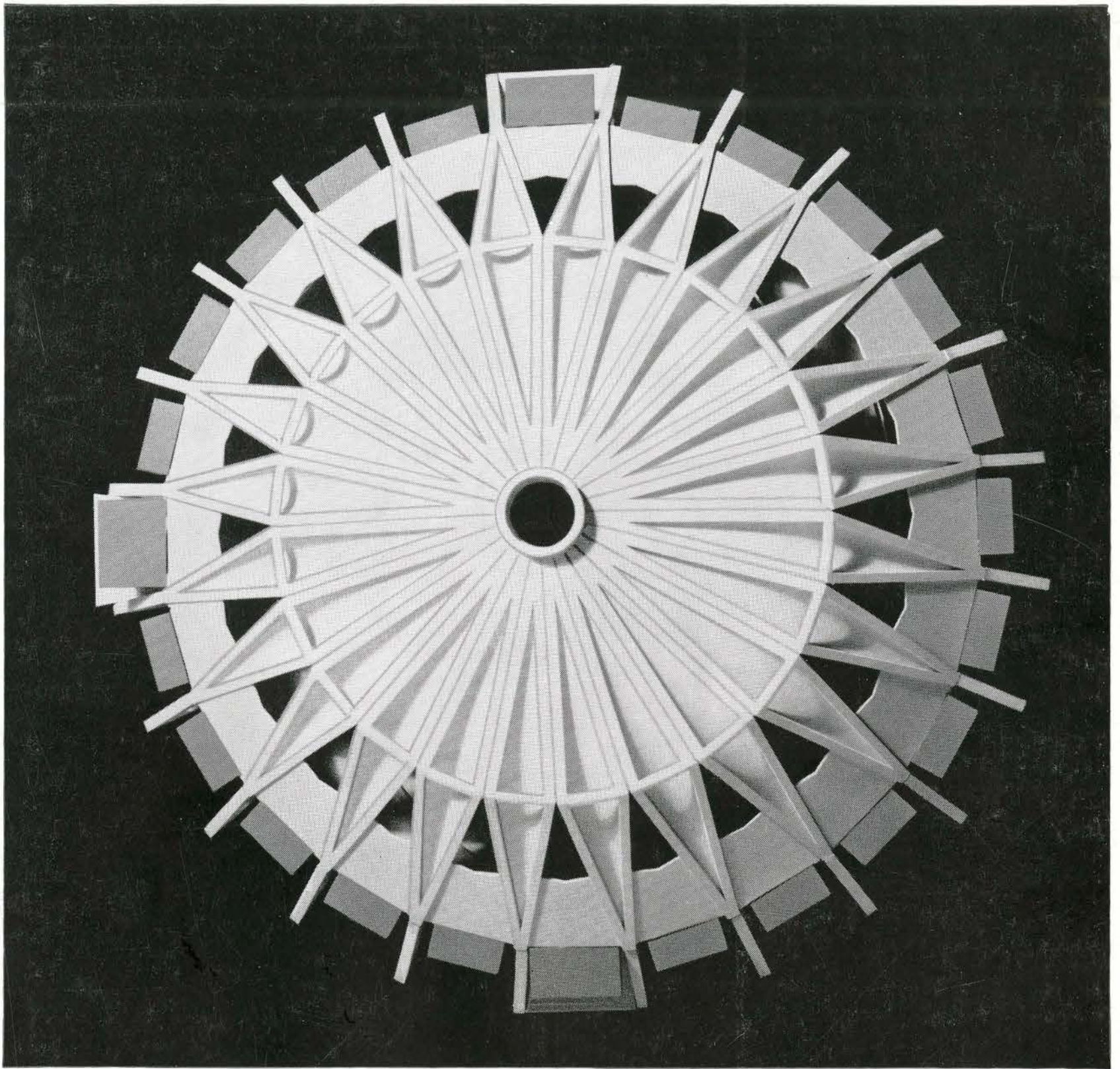


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