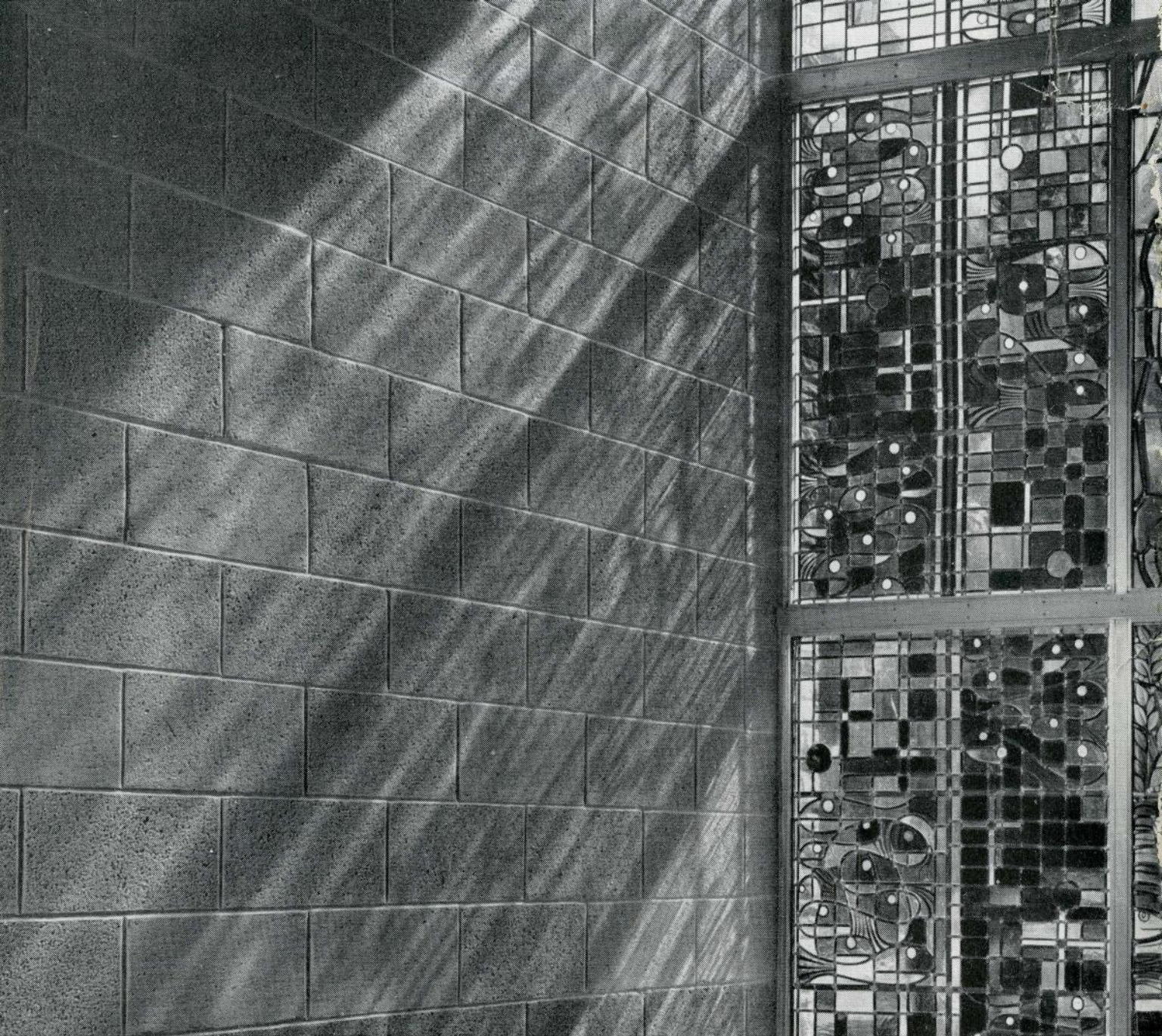


ROYAL ARCHITECTURAL INSTITUTE OF CANADA JOURNAL



AUGUST 1961

**ROYAL ARCHITECTURAL INSTITUTE OF CANADA
INSTITUT ROYAL D'ARCHITECTURE DU CANADA**



BUILD WITH BLOCK

and build for keeps

Nothing's a better-looking building investment than the modern concrete masonry wall. Nothing's sounder—especially when reinforced with Dur-o-wal, the engineered steel rod reinforcement with the patented trussed design. Can more than double flexural wall strength, outfunctions brick-header construction. Write to the Dur-o-wal Hamilton, Ont. address below for 44-page Armour Research Foundation test report.

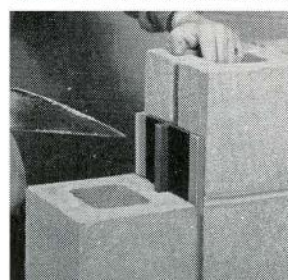
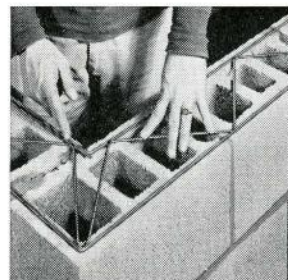
DUR-O-WAL® LTD.

Masonry Wall Reinforcement and Rapid Control Joint

789 Woodward Avenue, Hamilton, Ontario

U.S. DUR-O-WAL MANUFACTURING PLANTS

- Dur-O-wal Div., Cedar Rapids Block Co., CEDAR RAPIDS, IA.
- Dur-O-wal Div., Frontier Mfg. Co., Box 49, PHOENIX, ARIZ.
- Dur-O-wal Prod., Inc., 4500 E. Lombard St., BALTIMORE, MD.
- Dur-O-wal of Ill., 260 S. Highland Ave., AURORA, ILL.
- Dur-O-wal Prod. of Ala., Inc., Box 5446, BIRMINGHAM, ALA.
- Dur-O-wal of Colorado, 29th and Court St., PUEBLO, COLO.
- Dur-O-wal Inc., 1678 Norwood Ave., TOLEDO, OHIO



Strength with flexibility—the two basic factors for a repair-free masonry wall are assured by these intelligently engineered companion products. Dur-o-wal reinforcement, top left, increases flexural strength 71 to 261 per cent, depending on weight Dur-o-wal, number of courses, type of mortar. The ready-made neoprene Rapid Control Joint, beneath, flexes with the wall, keeps itself sealed tight.

*Light Better
Live Better*

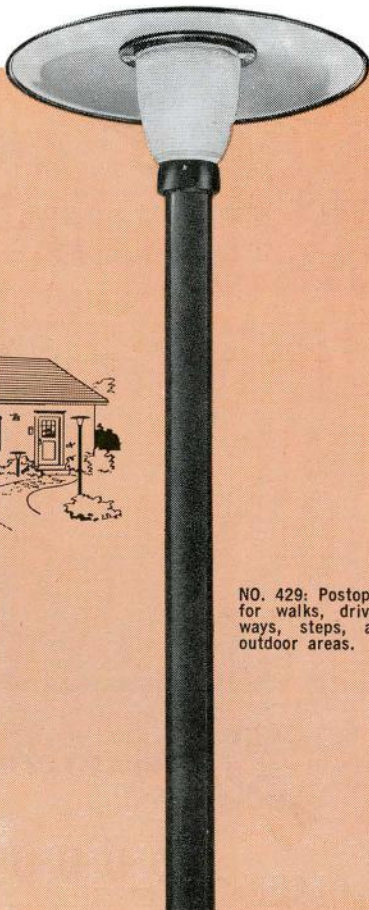
With NEW

HOLOPHANE

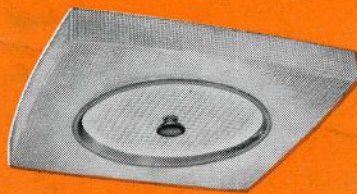
**Prismatically-Controlled*

LUMINAIRES

**For Indoor and Outdoor
Residential Lighting**



NO. 429: Postop®
for walks, drive-
ways, steps, all
outdoor areas.



NO. 580: Semi-Recessed Indoor Luminaire



NO. 434: Bracket Luminaire for entrances
and garage doors.



NO. 433: Bracket Luminaire for building—
sides and gates.



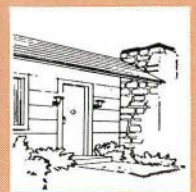
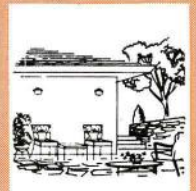
*** Deliver Twice As Much Light
Where it is Needed Most**

Home illumination has taken a great step forward with the development of Holophane luminaires that are so advanced, so effective that they set new standards of quality and performance. Based on time-tested principles of prismatic control these units direct maximum light to predetermined areas without glare or discomfort.

New Holophane indoor lighting meets both requirements for balanced illumination: (1) it provides highly effective light for every seeing task; (2) it brightens the entire interior... The styling conforms with today's decorative trends.

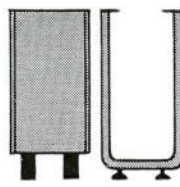
As guardians of the night, Holophane outdoor luminaires spread light over wide areas, create an environment of safety and increase property values... Indoor and outdoor units provide trouble-free service that lasts as long as the house... Installation and maintenance costs are low.

Write for Literature and Data

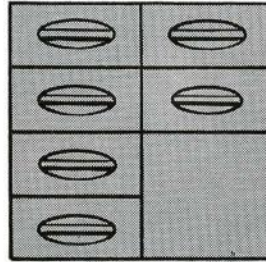


THE HOLOPHANE COMPANY LTD.
418 KIPLING AVENUE SOUTH
TORONTO 18, ONTARIO

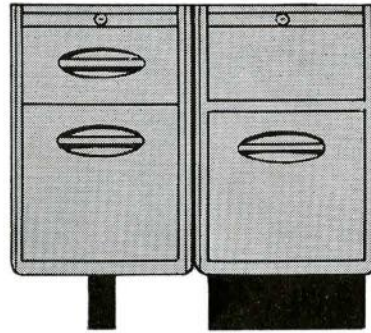
These are the legs That are in the room That Royal built!



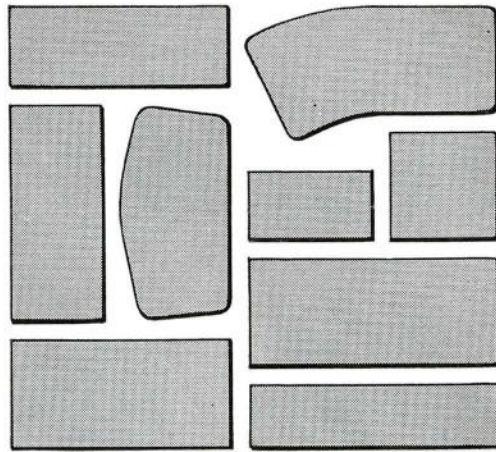
These are the drawers That ease your chores That glide on air That are in the room That Royal built!



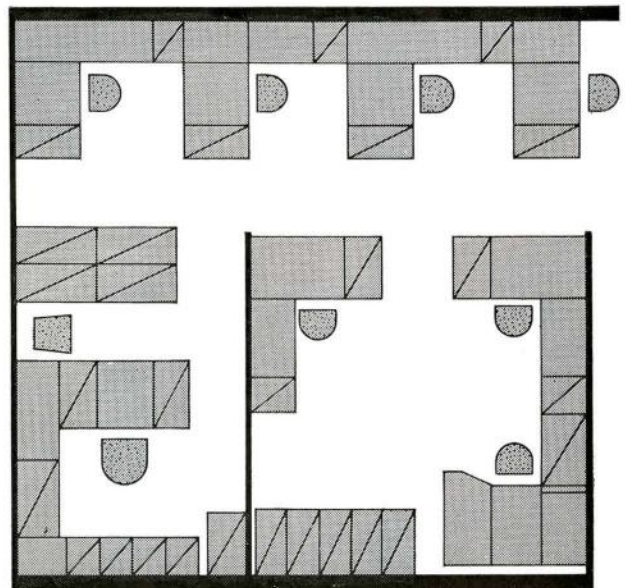
These are the bases That hold the drawers That ease your chores That rest on the legs That are in the room That Royal built!



These are the tops—all sizes and shapes That come in colours that match your drapes That affix to bases That hold the drawers That ease your chores That rest on the legs That are in the room That Royal built!

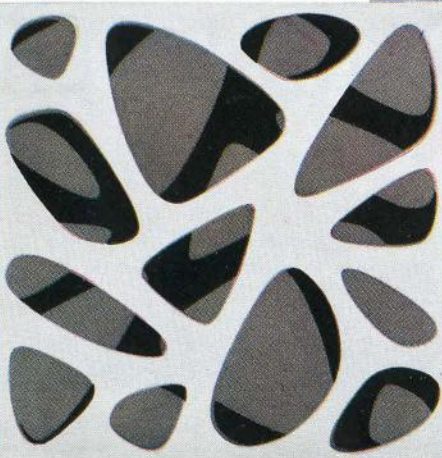
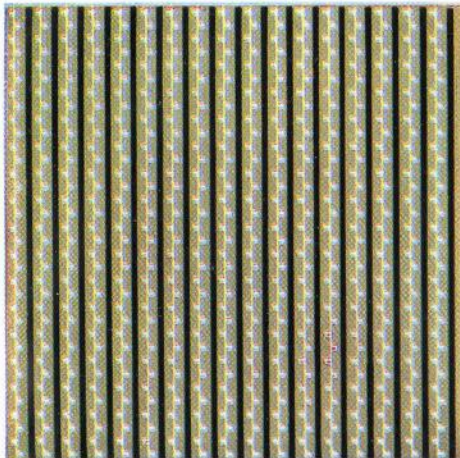


This is the office that Royal planned That's engineered to the job in hand That's easy to add to, as needs may change That's quick and simple to re-arrange That's composed of tops—all sizes and shapes That come in colours to match your drapes That affix to bases That hold the drawers That ease your chores That rest on the legs That are in the room That Royal built!

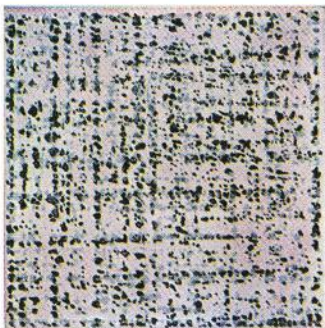


this is the room that *Royal* built!
 (...with the ARNOT line)

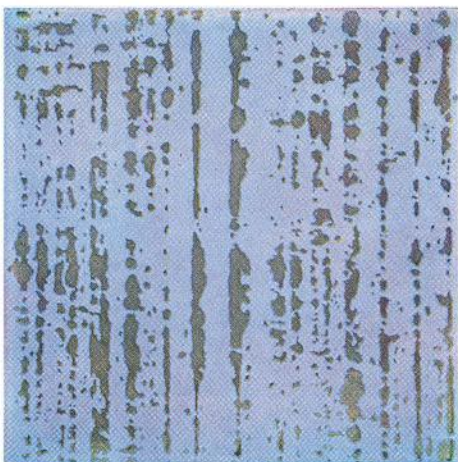
take
a look
at...



PILKINGTON'S TILES



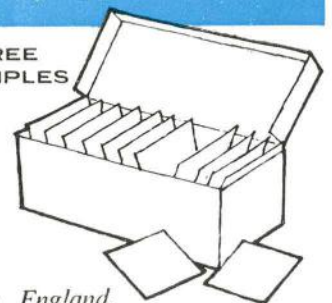
The wide range of Pilkington's tiles, both plain coloured and decorative, will delight you at once with its practicability and with its creative possibilities. And the skilled staff of Pilkington's Design Department will give you every assistance you need.



A sample pack containing the full range of plain colours and a booklet showing the full range of screen prints will be posted to you by our nearest agent on request. Please indicate if pack or booklet, or both, are required.

FREE SAMPLES

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Quebec, Ontario, Manitoba, Saskatchewan and Maritime Provinces:
 Kerr, Slee & Co., 1269, Greene Ave., Montreal, P.Q.
Alberta: Ronald F. Butler Ltd., 10532- 130 Street, Edmonton, Alberta
British Columbia:
 Atlas Import Products Ltd., 1221, Glen Drive, Vancouver, B.C.

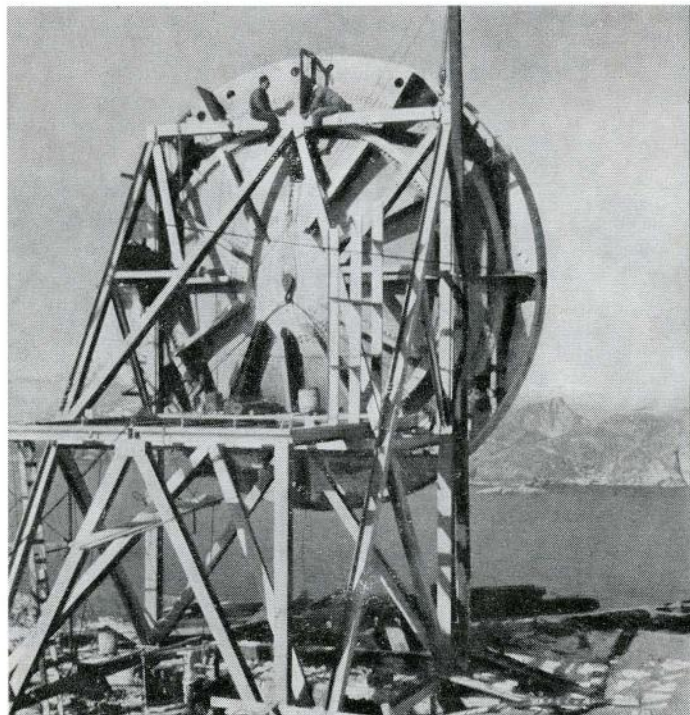


PILKINGTON'S TILES LIMITED

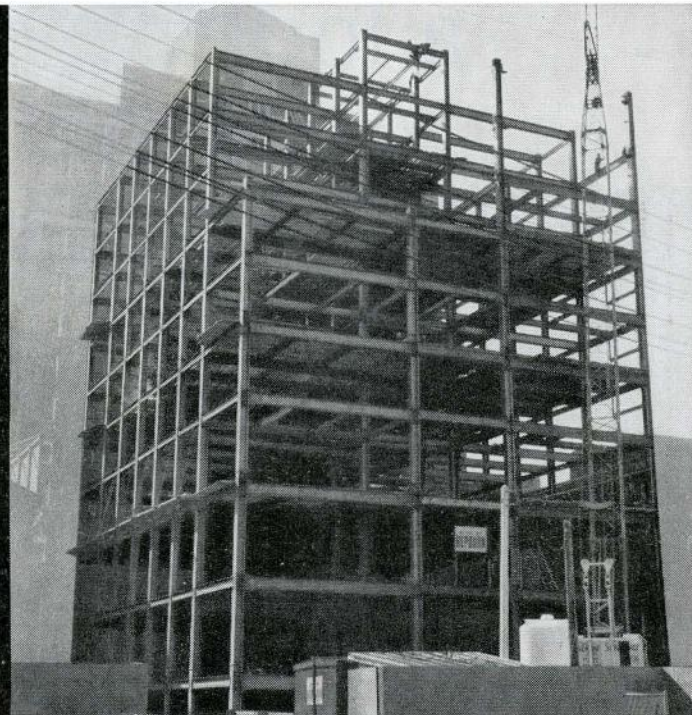
Clifton Junction, Manchester, England.

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BOLTING BRINGS STRENGTH...SPEED...SILENCE...SAVINGS!



Bolting gave this scatter wave antenna the strength, when only partially assembled, to withstand a violent Northern Labrador gale. It is now part of a Pole Vault System for the North East Air Command. (Steel erection by Horton Steel Works Limited, Toronto, Ont.)



Bolting allowed erection to proceed smoothly and QUIETLY on the new Nassau Street Building of the Toronto Western Hospital. The majority of the bolts used were supplied by Stelco. (Steel erection by John T. Hepburn, Limited, Toronto, Ont.)



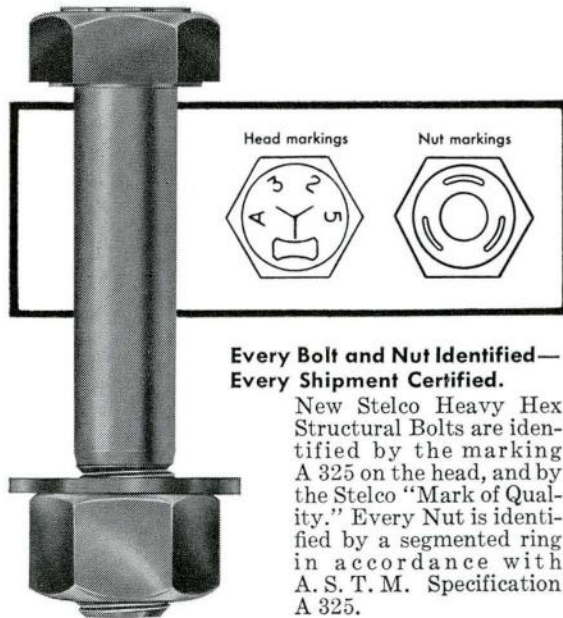
**HEAVY
HEX**

STRUCTURAL BOLTS

Stelco Heavy Hex Structural (High Strength) Bolts are now offered in a new design with shorter threads and larger heads. Only one washer is now required. Higher working stresses are allowed, enabling *two* bolts to provide shear strength equivalent to that of *three* rivets or regular High Strength bolts in bearing type joints. This achieves savings in bolts, drilling, punching, reaming—and in both shop fabrication and field erection.

Fully tested and approved by the Research Council on Riveted and Bolted Structural Joints, Stelco Heavy Hex Structural Bolts conform to A.S.T.M. Specification A 325. In addition to these new-style bolts, Stelco still maintains comprehensive stocks of regular High-Strength Bolts with A.S.A. Standard thread lengths.

*For full information, contact any
Stelco Sales Office.*



**Every Bolt and Nut Identified—
Every Shipment Certified.**

New Stelco Heavy Hex Structural Bolts are identified by the marking A 325 on the head, and by the Stelco "Mark of Quality." Every Nut is identified by a segmented ring in accordance with A. S. T. M. Specification A 325.

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Executive Offices: Hamilton and Montreal

Sales Offices: Halifax, Saint John, Montreal, Ottawa, Toronto, Hamilton, London, Windsor, Sudbury,
Winnipeg, Edmonton, Calgary, Vancouver. J. C. Pratt & Co. Limited, St. John's, Newfoundland.

61211.B

WILSON & COUSINS

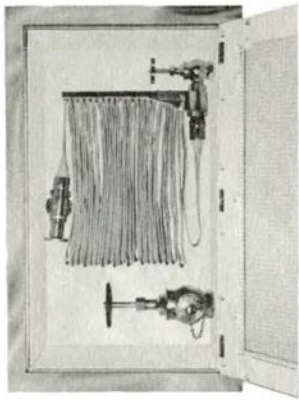
**FIRE
HOSE
CABINETS**

From an almost unlimited selection of styles and finishes, Wilson & Cousins can supply hose cabinets to match the attractiveness of your interior. If you wish to design your own cabinets Wilson & Cousins will assist you by advising you on the local fire regulations and build the cabinets to your exact specifications. This Fig. 1 series is designed for attractiveness efficiency with economy. See also the Wilson & Cousins Fig. 2 series.

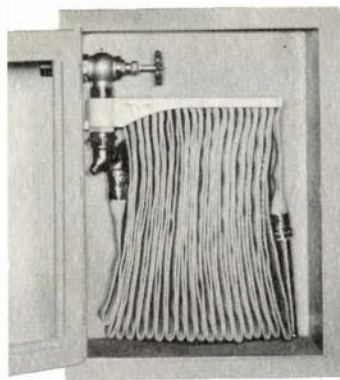


IE FIG. 1

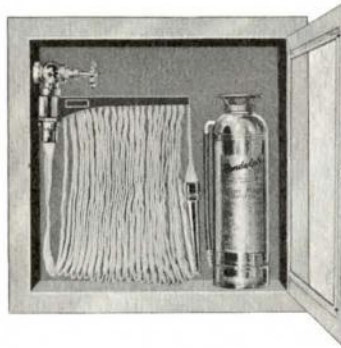
WILSON & COUSINS FIG. 1 Series HOSE CABINETS



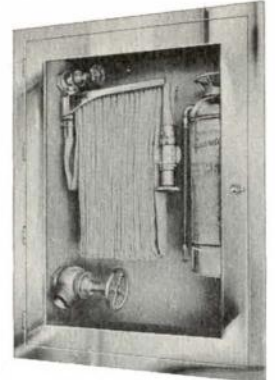
IE FIG. 1A



IE FIG. 1H



IE FIG. 1B



IE FIG. 1C

SEE REVERSE SIDE FOR WIDE SELECTION OF METALS AND FINISHES

	CAPACITY		DIMENSIONS						KNOCKOUTS			
	Hose	Valve	Width	INSIDE Height	Depth	Width	OUTSIDE Height	Depth	From Bottom	From Top	Valve Centres	From Back
IE FIG. 1 and 1H	50	1 1/2	19	27	6	23	31	6 1/2		3 1/2		3
	75	1 1/2	22	30	6	26	34	6 1/2		3 1/2		3
	100	1 1/2	22	37	6	26	41	6 1/2		3 1/2		3
IE FIG. 1A	50	1 1/2 & 2 1/2	19	37	10	23	41	10 1/2	6 1/2	3 1/2	27	4 1/2
	75	1 1/2 & 2 1/2	22	40	10	26	44	10 1/2	6 1/2	3 1/2	30	4 1/2
	100	1 1/2 & 2 1/2	22	48	10	26	52	10 1/2	6 1/2	3 1/2	38	4 1/2
IE FIG. 1B	50	1 1/2	30	30	9	34	34	9 1/2	3 1/2	4 1/2		
	75	1 1/2	30	30	9	34	34	9 1/2	3 1/2	4 1/2		
	100	1 1/2	30	37	9	34	41	9 1/2	3 1/2	4 1/2		
IE FIG. 1C	50	1 1/2 & 2 1/2	30	37	10	34	41	10 1/2	6 1/2	3 1/2	27	4 1/2
	75	1 1/2 & 2 1/2	30	40	10	34	44	10 1/2	6 1/2	3 1/2	30	4 1/2
	100	1 1/2 & 2 1/2	30	48	10	34	52	10 1/2	6 1/2	3 1/2	38	4 1/2

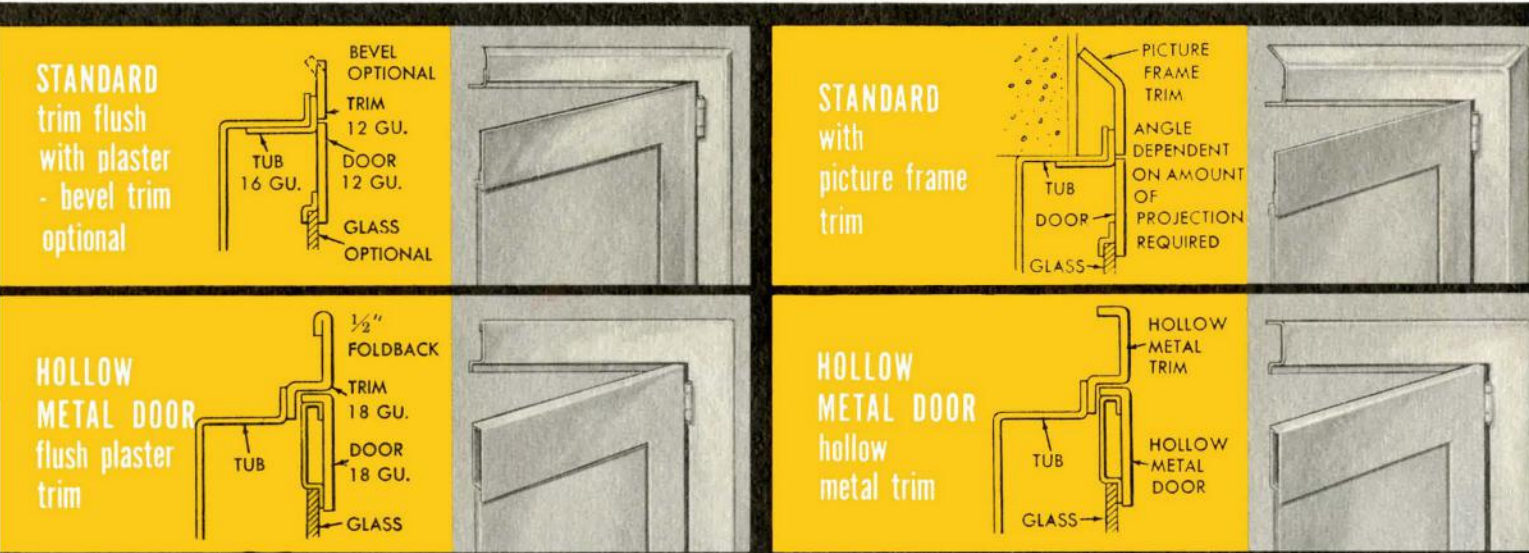
SPECIFICATIONS

WILSON & COUSINS FIRE HOSE CABINETS

FIG. 1 Series

- IE FIG. 1 Fire Hose Cabinet. Tub to be of 16 gauge steel with trim & door of 12 gauge steel. To contain a Wilson & Cousins Peerless Hose Rack complete with (fifty or seventy-five or one hundred) feet of 1½" Underwriters Labelled Linen Fire Hose, with Forgeline Couplings attached, 1½" Forgeline Valve & an 1½" HN #3 Wonder Fog Nozzle or (1½" x 10" Straight Stream Forgeline Nozzle).
- IE FIG. 1A (additional to Fig. 1) Cabinet also to contain a 2½" Cast Brass Valve with local Fire Dept. thread, complete with Cap & Chain.
- IE FIG. 1B (additional to Fig. 1) Also to contain a 2½ Gallon Soda & Acid type Underwriters Approved Extinguisher, (Underwriters Approved Co 2 Extinguisher), (Underwriters Approved 2½ Gallon Foam type Fire Extinguisher) or (2½ Gallon Pressurised Water Extinguisher)
- IE FIG. 1C Includes all of the specifications given above.
- IE FIG. 1H Same as IE FIG. 1 above. Includes Hydrolator Valve that prevents leakage into the hose.

CONSTRUCTION DETAILS



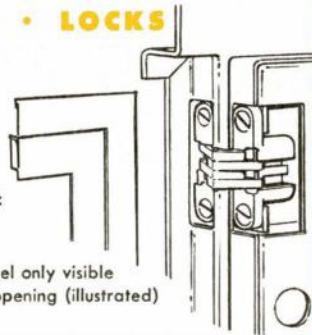
HINGES • GLASS • LOCKS

GLASS 3/16" crystal 1/4" plate
5/16" cast wire 5/16" polished wire
1/4" armour plate British Heat Treated

LOCKS Corbin Latch Corbin Lock
Yale Lock Elkhart Lock
for institutions only - all cabinets in building keyed alike to specifications. Note: Check with local authorities.

HINGES

- 1 Standard construction Crofton Hinge barrel only visible
- 2 Completely concealed Hinge, 180° full opening (illustrated)
- 3 Piano Hinge - full length



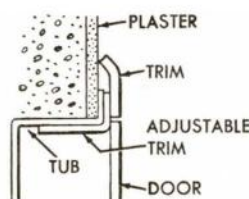
METALS AND FINISHES

EXTERIOR FINISHES	Plain prime grey coat	Hammer tone
	Plated on Steel	Bright chrome Satin chrome Bright brass Satin brass Bright coppertone Gold plate
Best grade Muntz metal	Satin coppertone	Rhodium plate
	Bright brass plate	Satin brass plate
	Bright stainless steel	Satin stainless steel
	Plain aluminum	Clear anodized aluminum
INTERIOR FINISHES	Plain white	Coloured paints Aluminum lacquer Red lacquer or to your selective specification

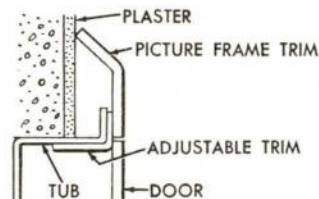
WILSON & COUSINS ADJUSTABLE TRIM ASSURES PERFECT FIT TO WALL

AVAILABLE WITH ALL TYPES OF CABINETS

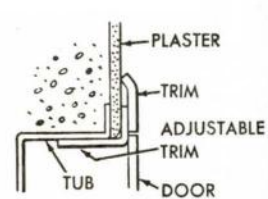
NOTE: Where adjustable flush-to-plaster trim is selected with Hollow Metal Door, tub must be installed with flange recessed 3/8" from finished wall surface.



Example 1
Tub installed correctly - adjustable trim used.



Example 2
Tub installed protruding from wall - adjustable bevel type trim used to compensate



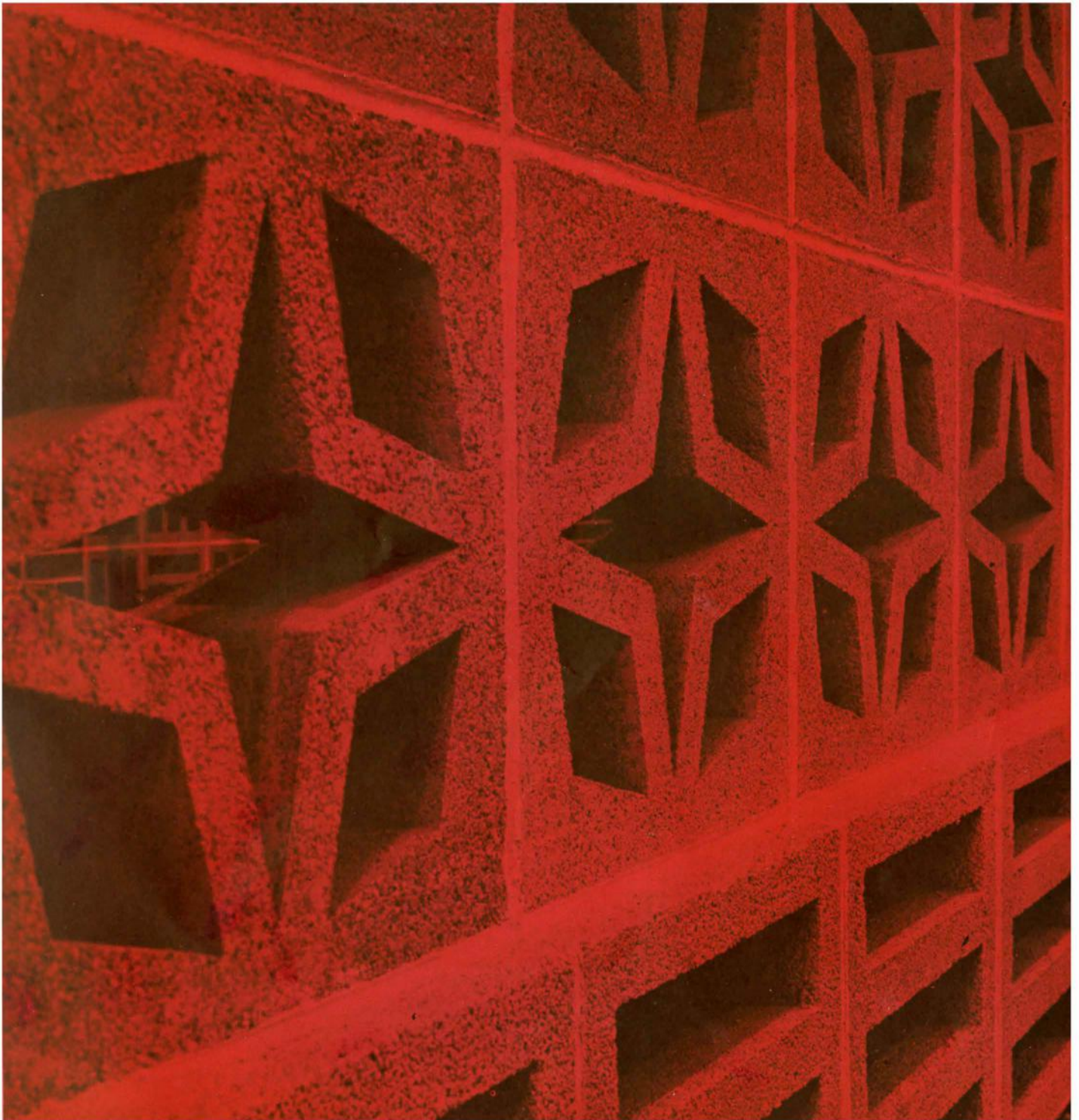
Example 3
Plaster added after tub installed results in tub being recessed in wall, adjustable trim compensates

Since 1881

WILSON & COUSINS CO. LIMITED

Canada's oldest and largest manufacturer of fire protection and safety equipment.

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MONTREAL: 714 Vitre St. W.
WINNIPEG: 100 Lenore St.
CALGARY: 3501 18th St. W.
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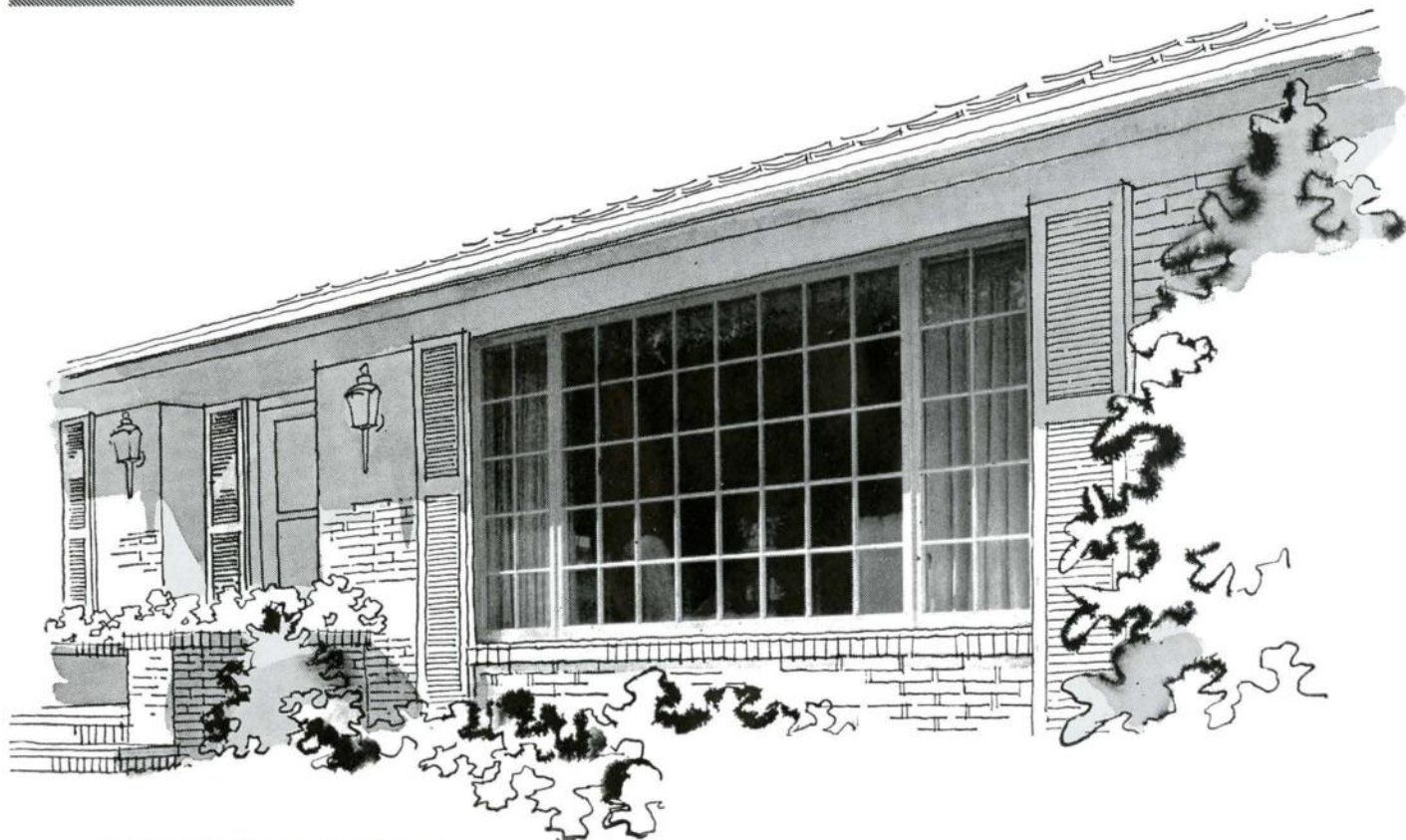
CONCRETE TAKES ON A NEW LOOK. (Concrete screen by Storrar "Dunbrik" as displayed at National Home Show). This is the bold new look in concrete block by Dunbrik. It is a graphic example of imagination working with the simplicity of concrete and cement. In Canada today the modern look is concrete. St. Mary's has produced Canada's finest cement since 1912. You will see the famous Pyramid Brand wherever men achieve the ultimate in building and design. **ST. MARY'S CEMENT CO. LIMITED** 2221 Yonge Street, Toronto HU 5-4411





wood casements

offer showcase beauty
plus convenience of "instant screens"



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Standard PELLA WOOD CASEMENT WINDOWS combine into hundreds of arrangements and are equipped with exclusive ROLSCREENS®—the inside screens that *roll up and down like window shades . . .* and muntins that snap in, snap out for easy painting and cleaning. Completely surrounded by a steel frame, PELLA CASEMENTS offer Dual Glazing panels or insulating glass for year 'round comfort. Sizes range up to 68" glass height. All units are factory-assembled. For complete specifications, contact your nearest distributor. Consult your classified telephone directory or the list at left.



EVEN WRONG-WAY RALPH IS PROTECTED

Small feet or large—a "wrong-way" step on the actuating mat and the power goes off. A Kawneer Automatic Entrance permits "wrong-way" emergency use with manual operation. Power is restored only when both mats are cleared. Kawneer Automatic Entrances are completely safe . . . protect fingers too. Fingers trapped in lock side or pivot side . . . won't even be bruised. For complete details of Kawneer Safety-designed Automatic Entrances write: Kawneer Company Canada Limited, Department 75, 1460 Don Mills Road, Don Mills, Ont.

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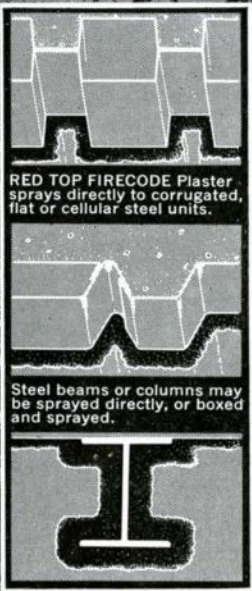
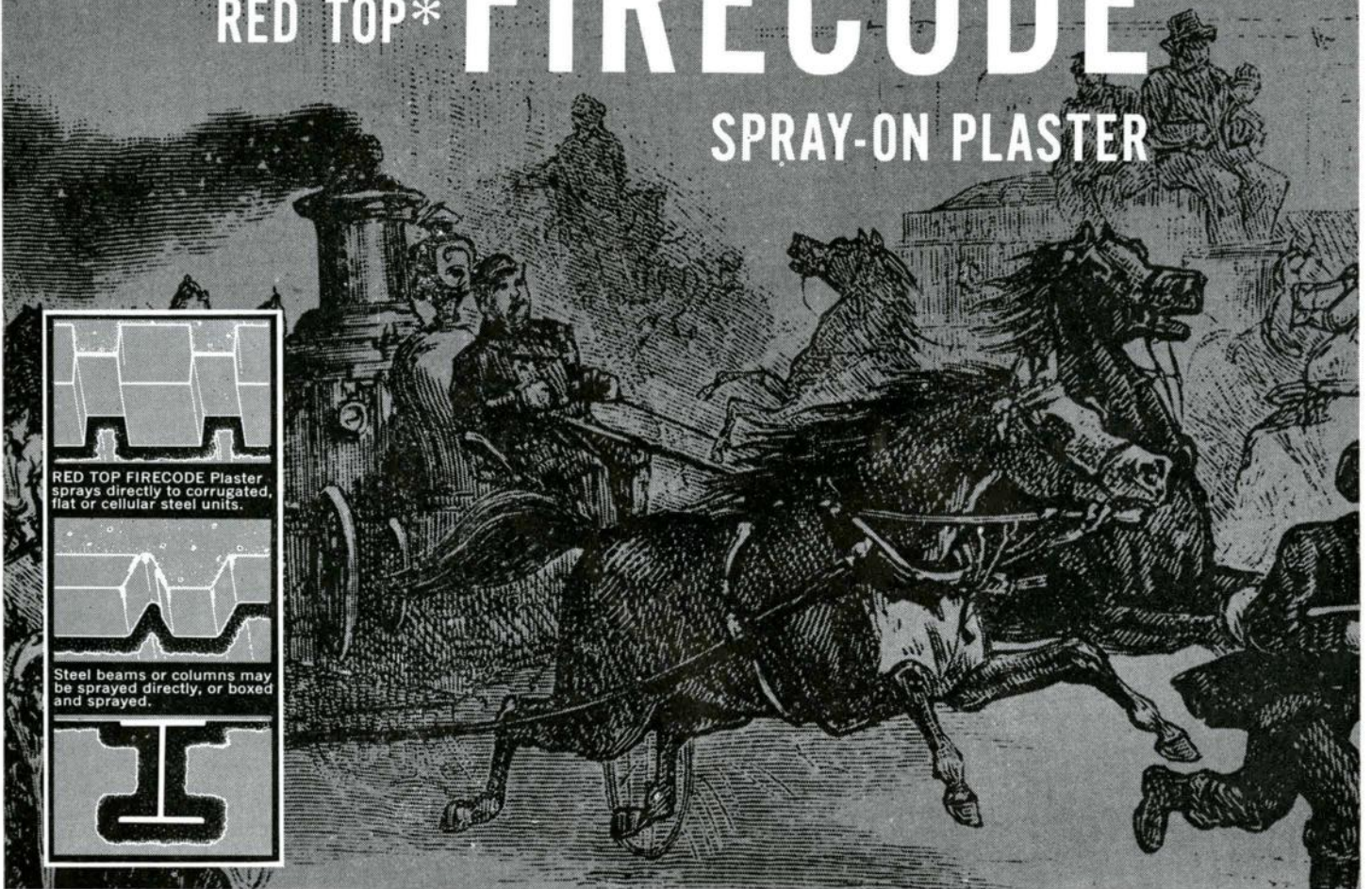
*2-way
SAFETY!
Automatic Entrances
by KAWNEER*

Greatest advance in fire protection since the volunteer fireman

**NEW
RED TOP***

FIRECODE

SPRAY-ON PLASTER



RED TOP FIRECODE Plaster sprays directly to corrugated, flat or cellular steel units.

Steel beams or columns may be sprayed directly, or boxed and sprayed.

Bettmann Archive

One coat gives the fire rating you generally need—contact-fireproofs steel deck assemblies at low cost.

The greatest advance in low-cost fire protection for steel frame structures in over half a century: new one-coat RED TOP FIRECODE Plaster! It saves labour—sprays directly to steel decks, supporting beams and columns to provide the exact fire rating needed. It saves plaster—a single contour application is sufficient for most steel deck assemblies. New RED TOP FIRECODE adheres to steel with a super-strong bond. Because one man can apply it, without hand tooling, you get improved fireproofing *at substantially less cost*. See your C.G.C. representative, or send the coupon today for complete details.

*T.M. Reg. In Can.



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the greatest name in building

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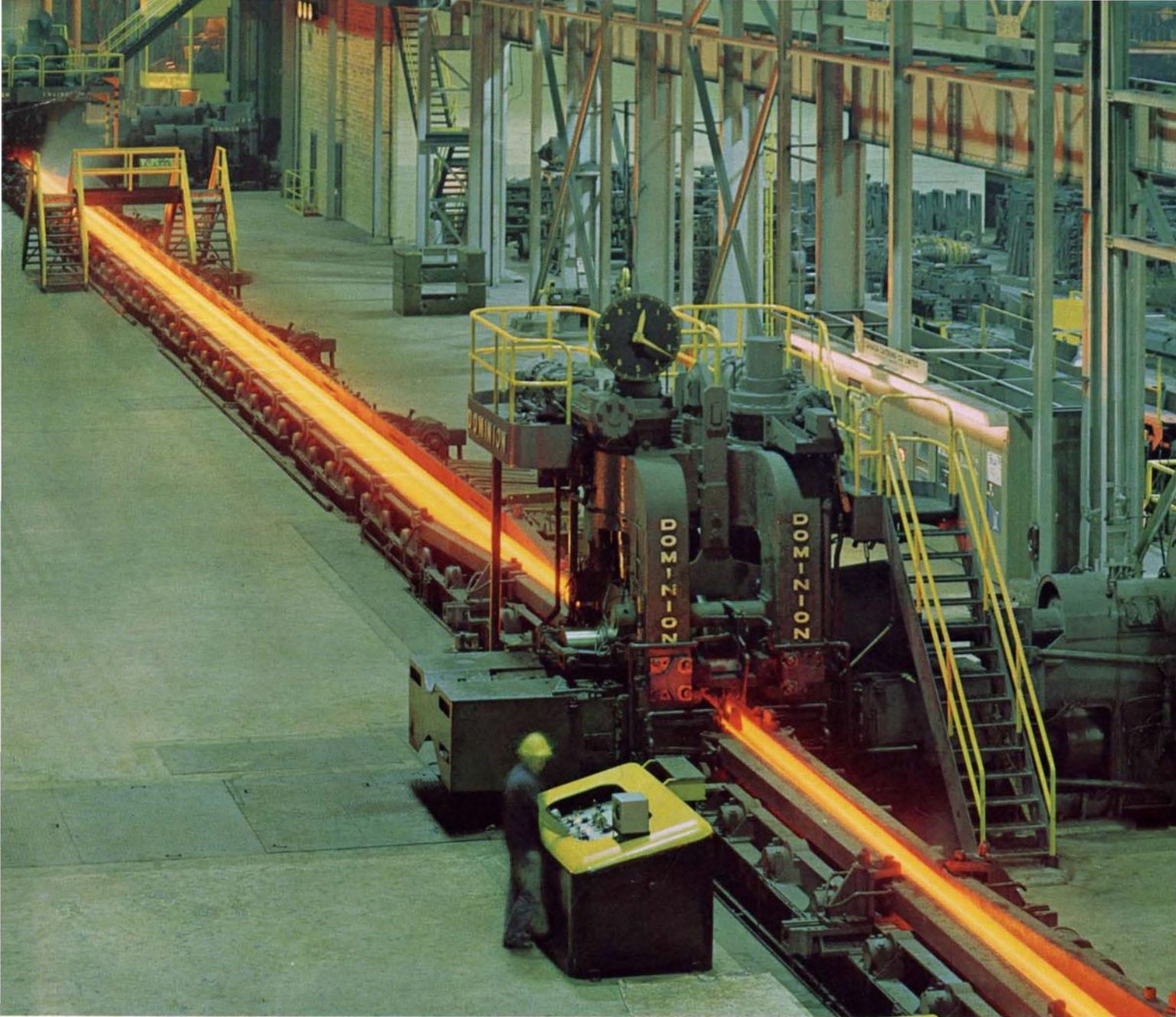
Please send complete information on the time and material savings of new RED TOP FIRECODE Plaster.

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NOW... A DEPENDABLE **CANADIAN** SOURCE FOR **WIDE FLANGE BEAMS**

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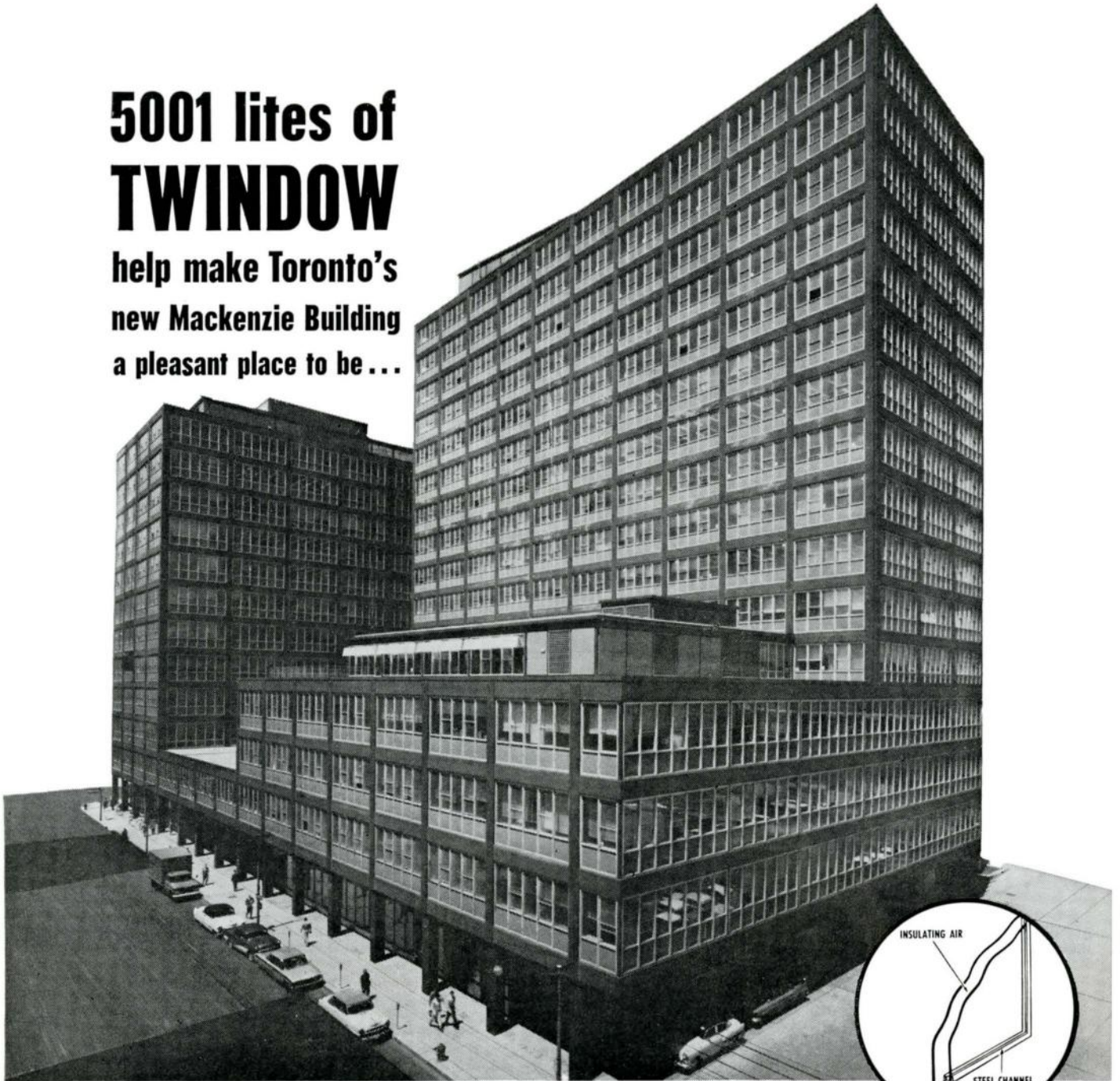
THE **ALGOMA STEEL**
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Sault Ste. Marie, Ontario

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ARCHITECTS: *Shore & Moffat, Toronto* GENERAL CONTRACTOR: *Redfern Construction Company Limited, Toronto*
GLAZING CONTRACTOR: *Canadian Pittsburgh Industries Limited*

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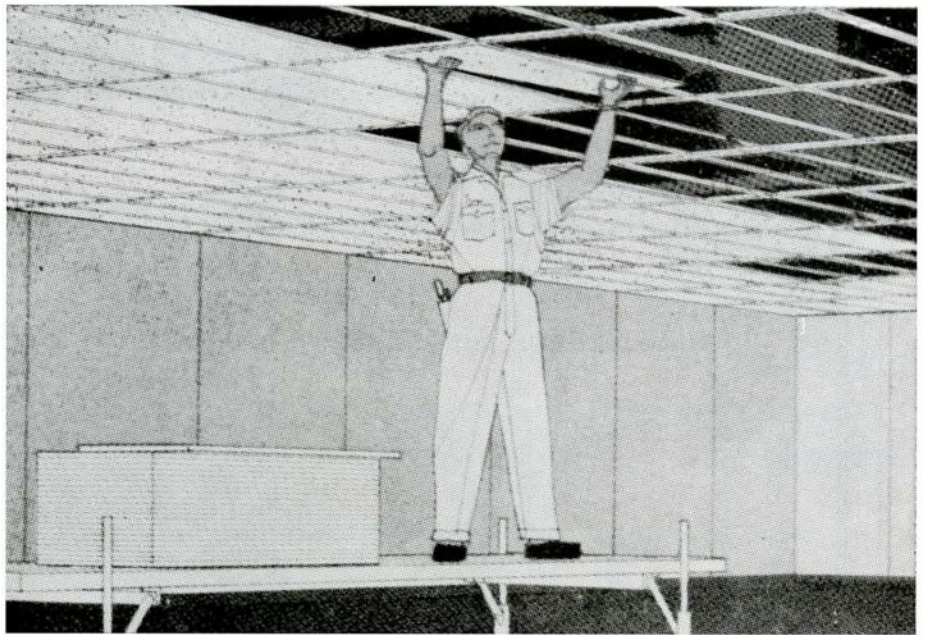
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The Fire Guard lay-in ceiling system has been given a three-hour beam protection rating by Under-

writers' Laboratories, Inc. Assemblies using bar joist and slab as well as beam and steel floor construction earned two-hour ratings. Acoustical Fire Guard tile, with U.L. ratings of up to four hours, can be used in areas that require even more protection.

The Acoustical Fire Guard lay-in ceiling is available in both the popular Classic and Fissured designs. There are two nominal sizes: 24" x 24" x 5/8" and 24" x 48" x 5/8".

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**Armstrong Cork Canada Limited,
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- New Armstrong Acoustical Fire Guard lay-in units for ceilings.

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Company.....

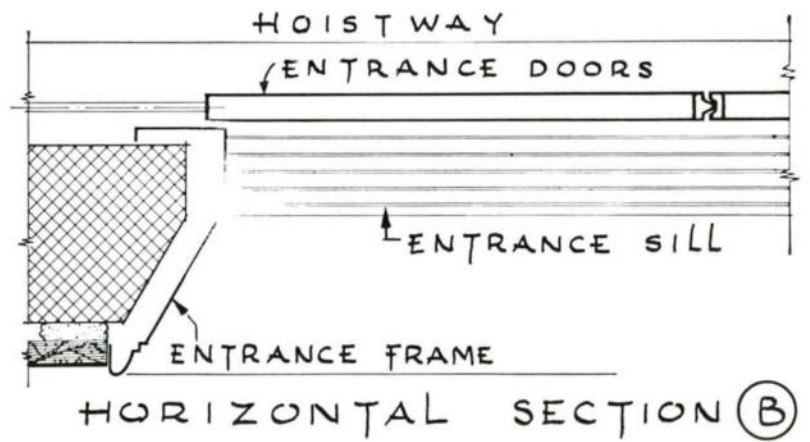
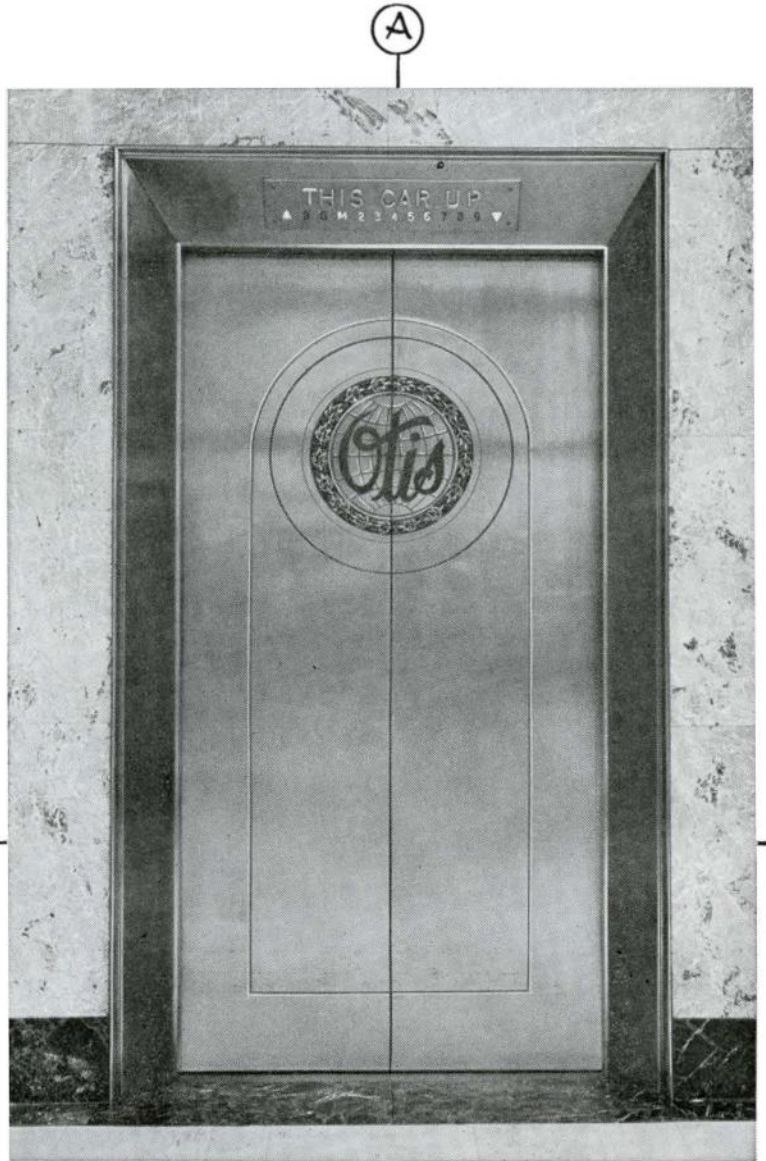
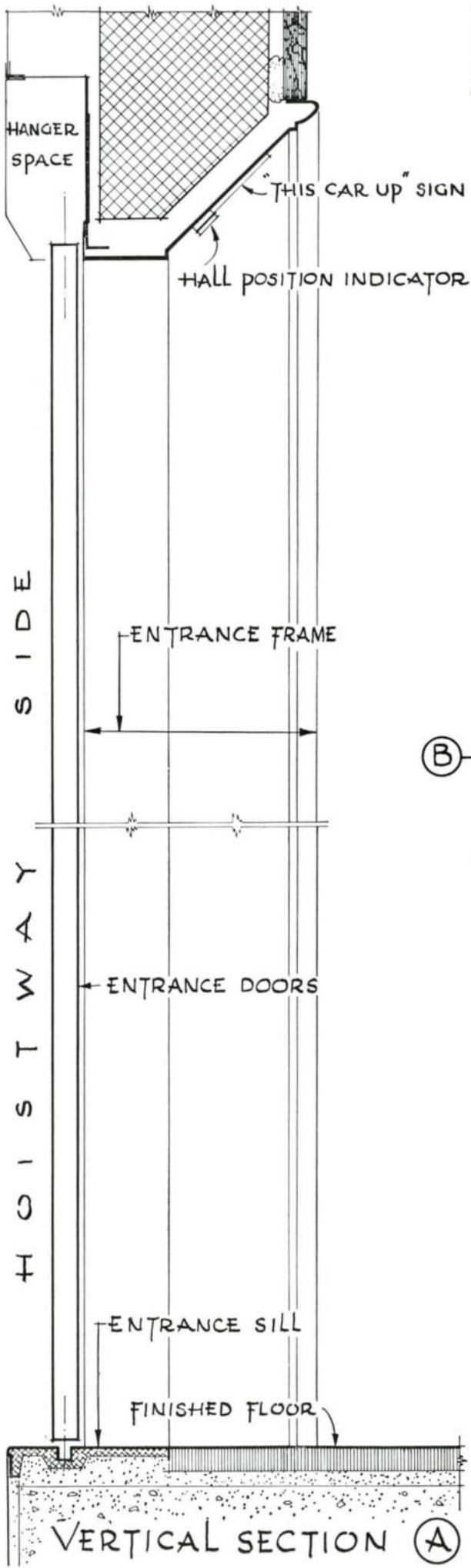
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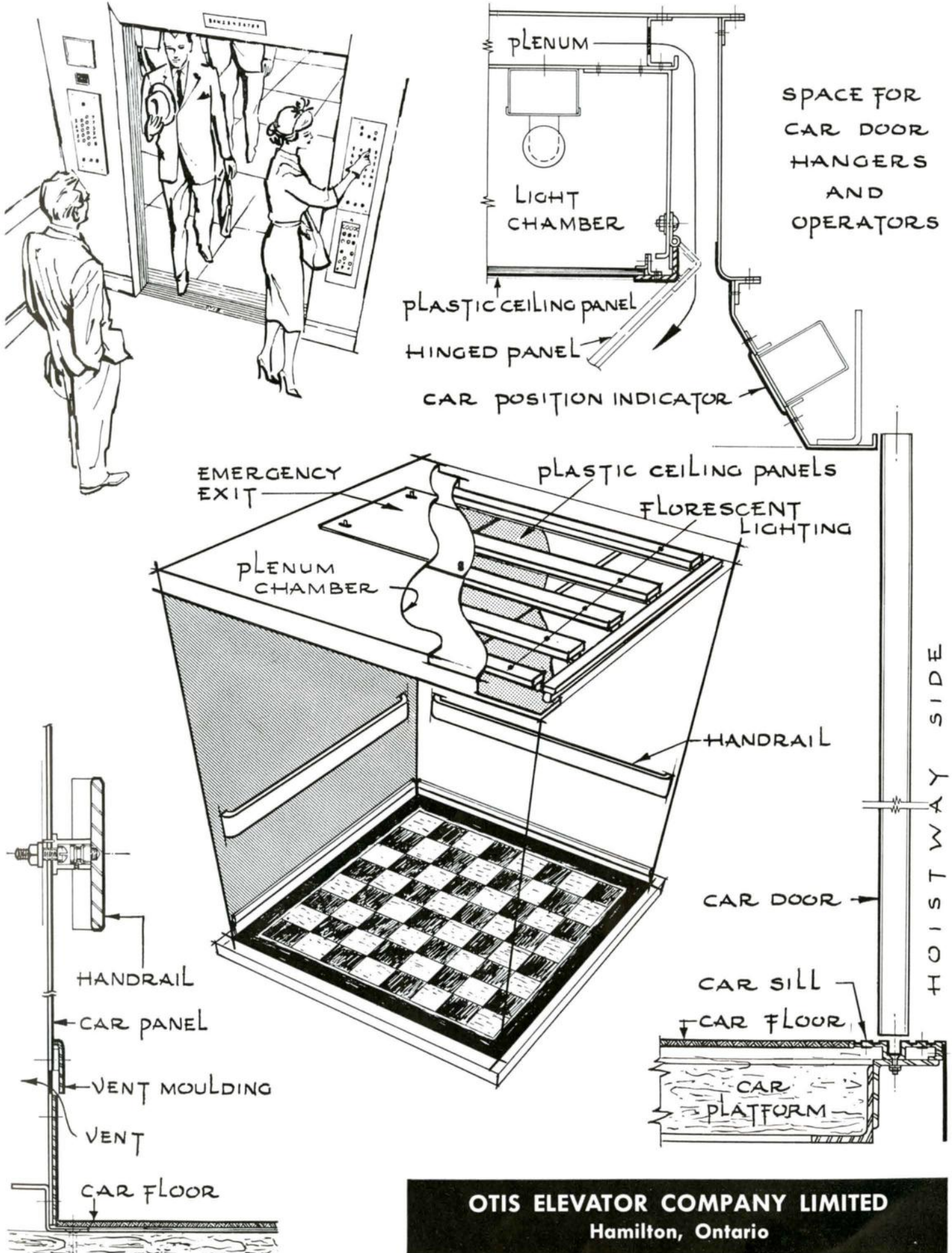
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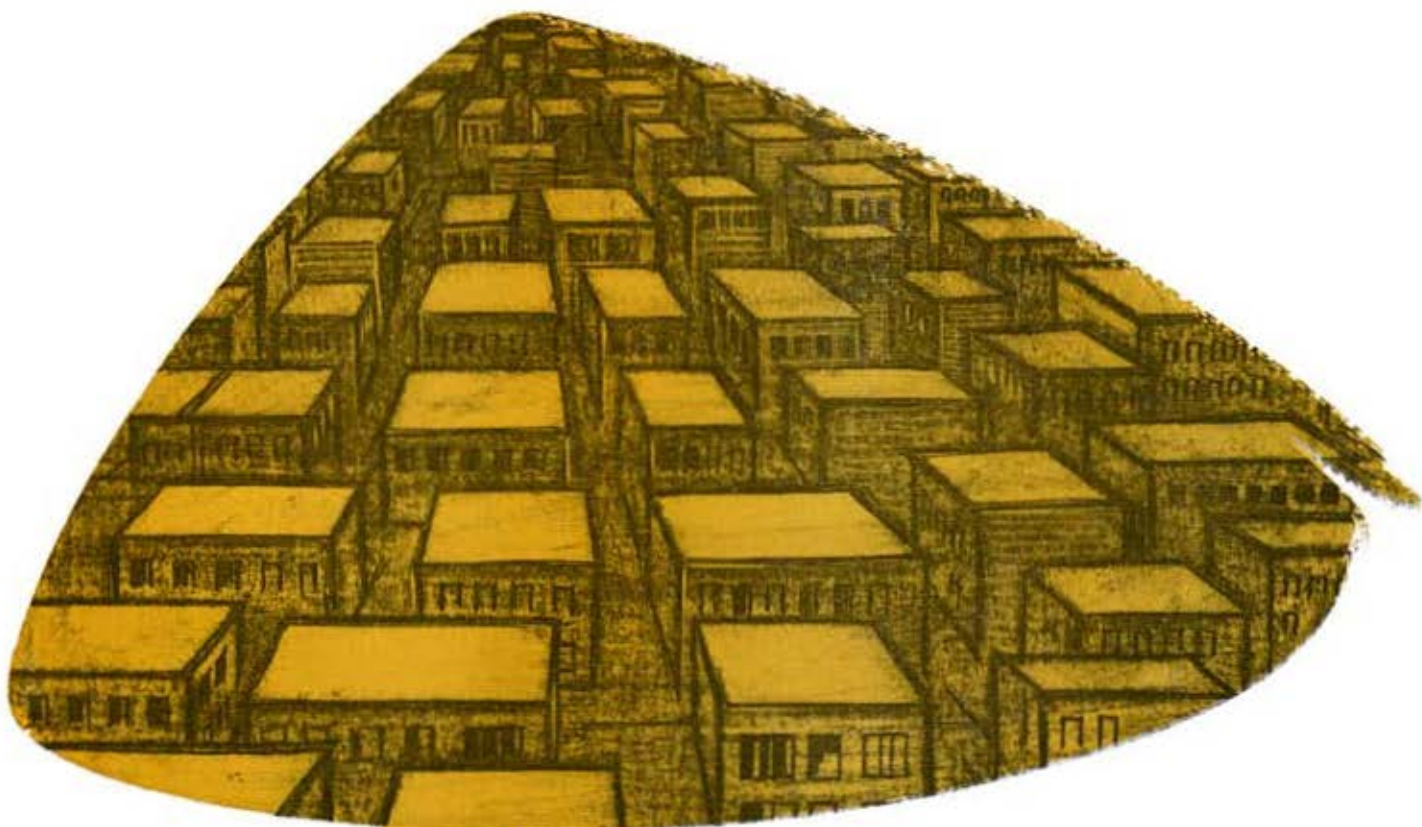


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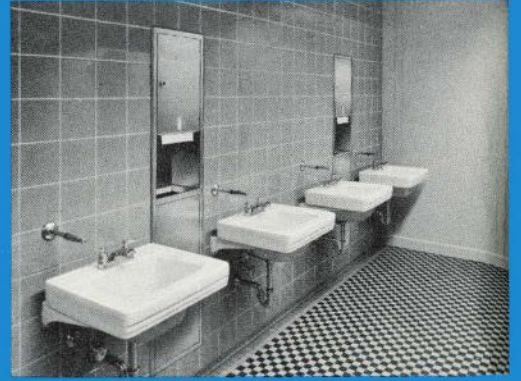
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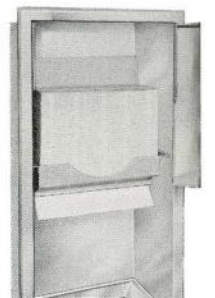
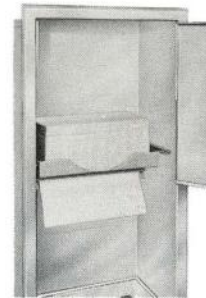
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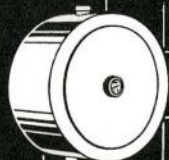
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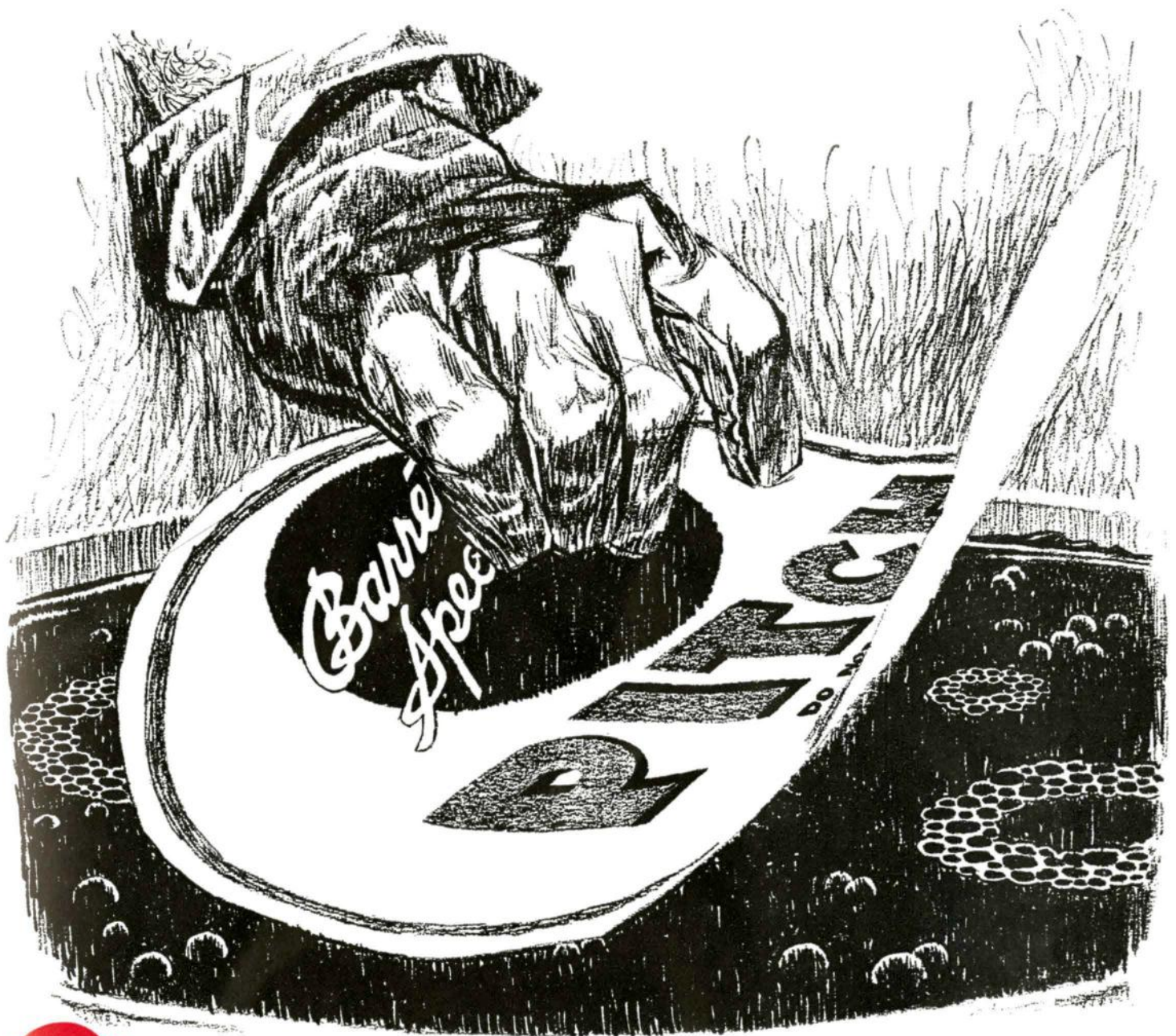
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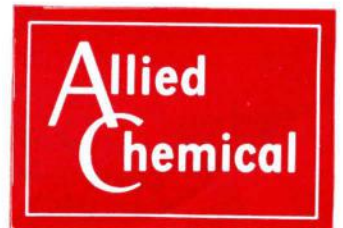
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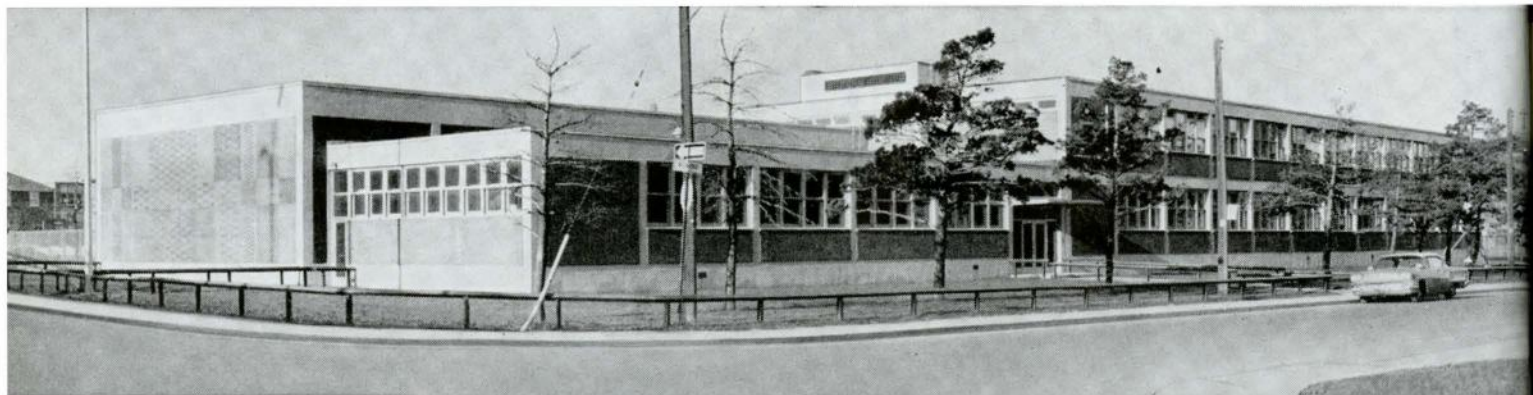
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COST THOUSANDS OF DOLLARS LESS PER CLASSROOM



ABOVE: Exterior view of Ecole St. Bernardin de Sienne, Ville St. Michel, P.Q. Showing structural concrete, concrete masonry walls.

RIGHT: Interior view of same structure.

Architect: Louis J. Lapierre.
Consulting Engineer (structure): J. N. Marceau & Associates.
General Contractor: Cité Construction Cie Ltée.



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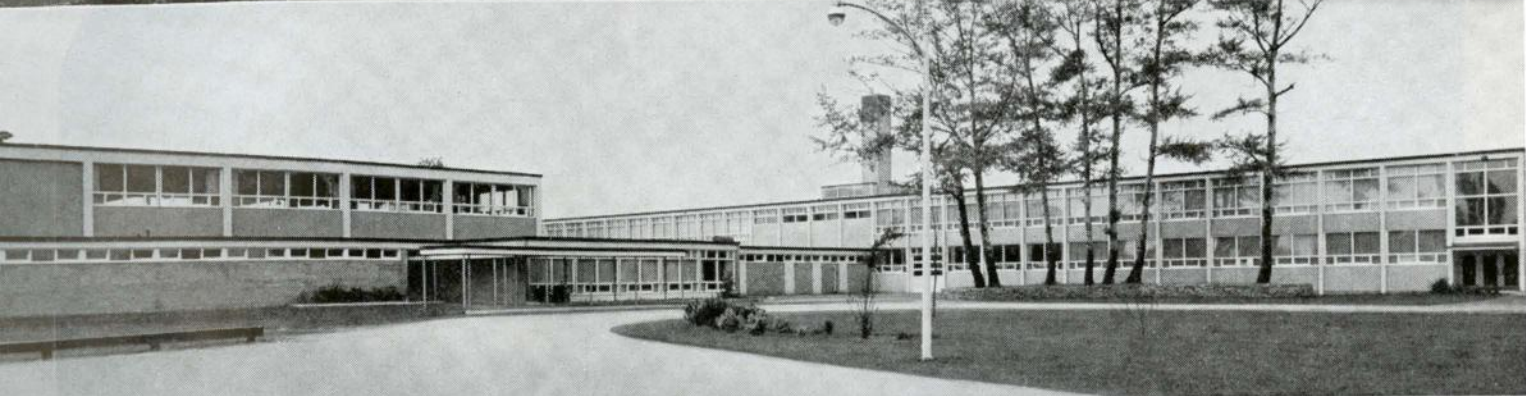


CANADA CEMENT



LEFT: King Edward Junior High School, Edmonton, an all concrete masonry building.
Architect: **John A. MacDonald**.
General Contractor: **Universal Construction Co. Ltd.**

RIGHT: Mill Creek School, Edmonton
Precast concrete frame and concrete masonry walls with a stucco finish.
Architect: **Bell & McCulloch**.
Consulting Architect: **W. W. Butchart**.
Consulting Engineer: **Angus Butler & Associates Ltd.**
General Contractor: **Platten Bros. Construction Ltd.**



ABOVE: Exterior view of Collingwood District Collegiate Institute, Collingwood, Ont. This school features a concrete structure & concrete masonry walls.

(Model of this school displayed in Geneva, Switzerland, by Canadian Educational Association and Department of External Affairs as typical example of modern Canadian school.)



LEFT: Interior view of same structure
Architects & Consulting Engineers: **Shore & Moffatt**.
General Contractor: **Dalton Engineering & Construction Co. Ltd.**

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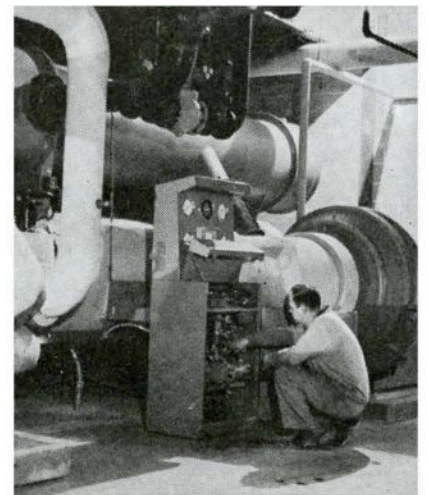
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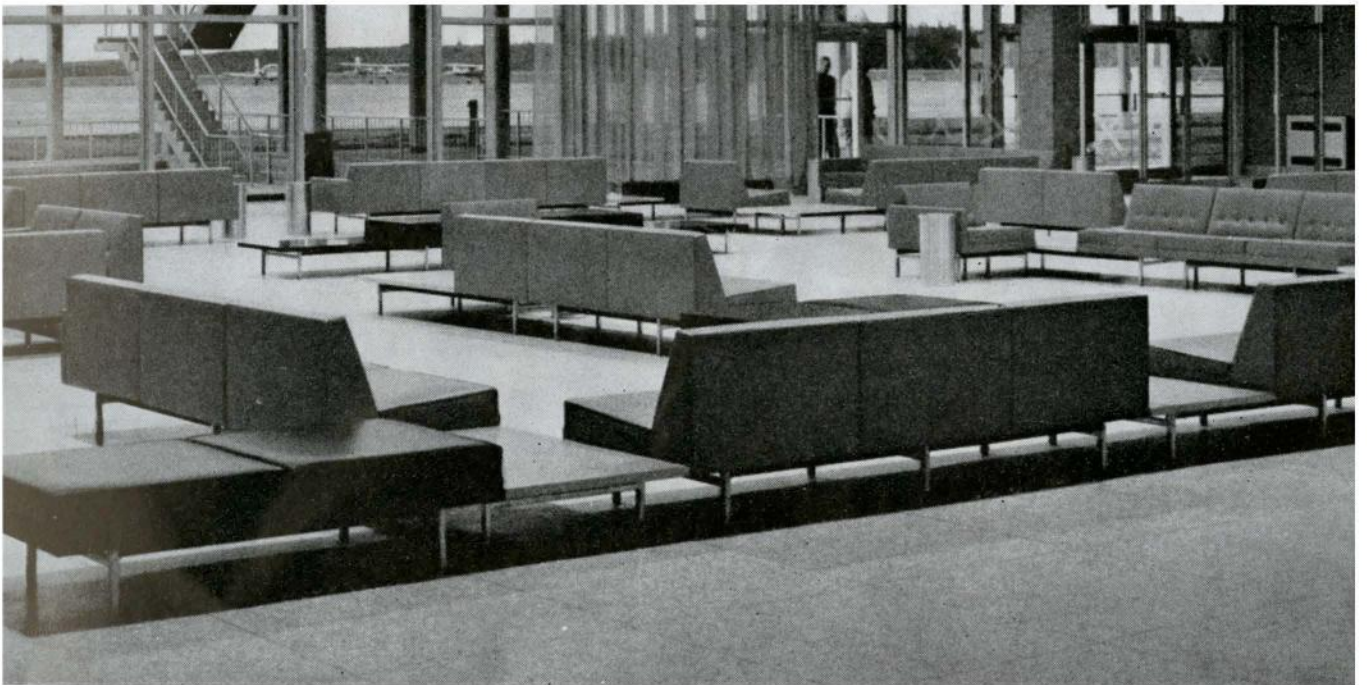
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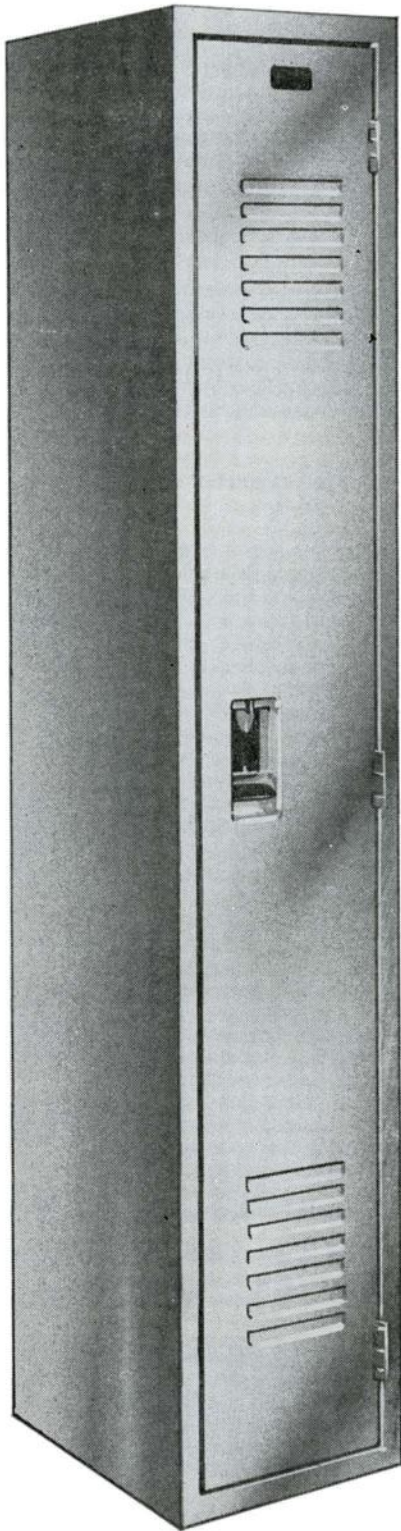
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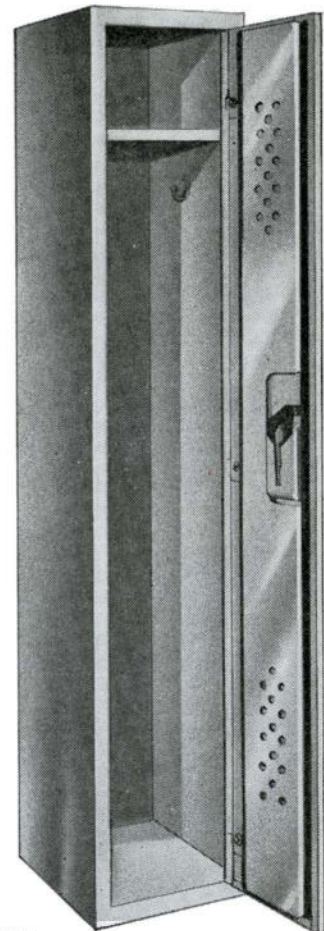


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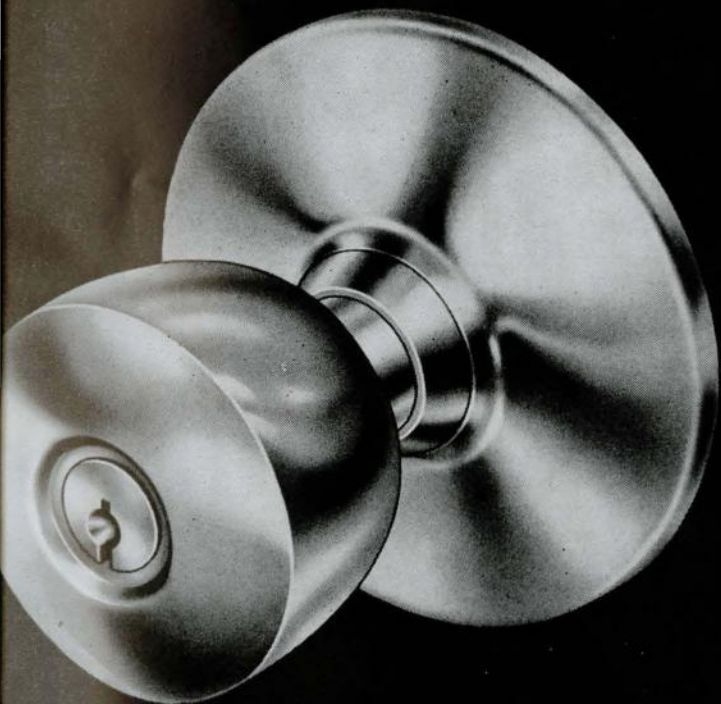
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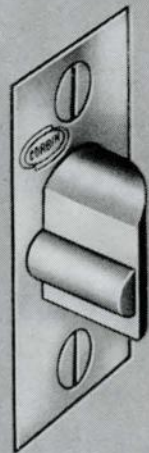
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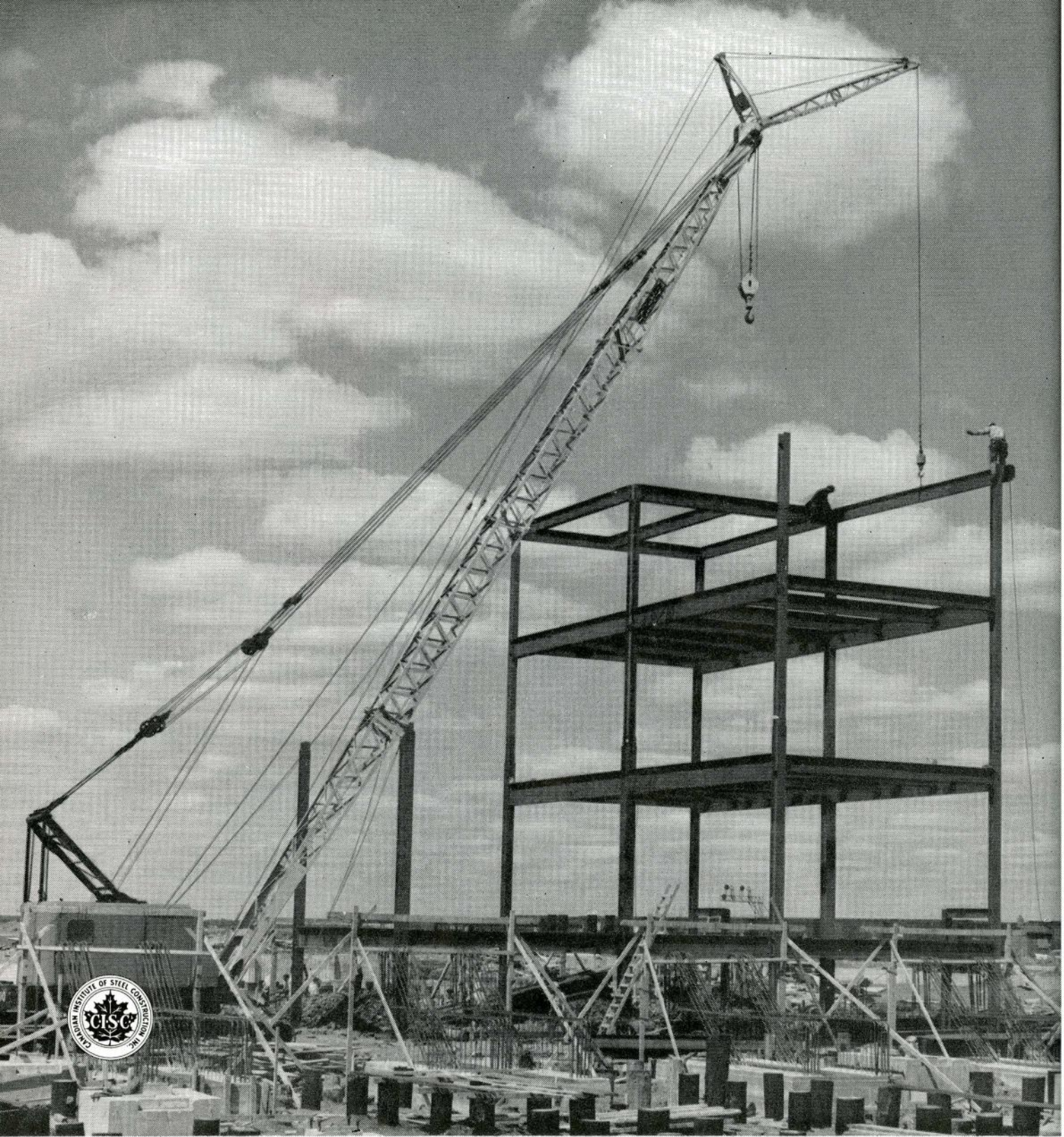
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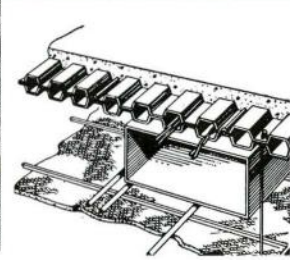
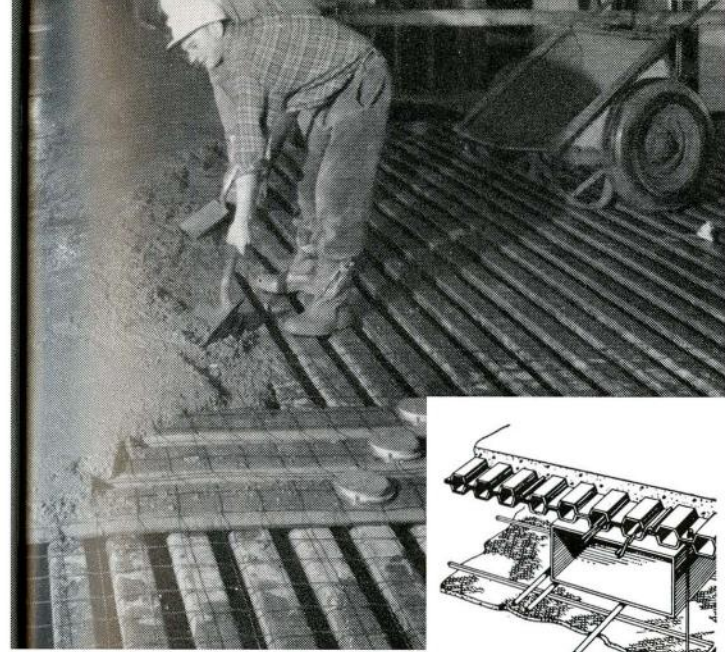
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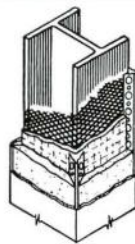
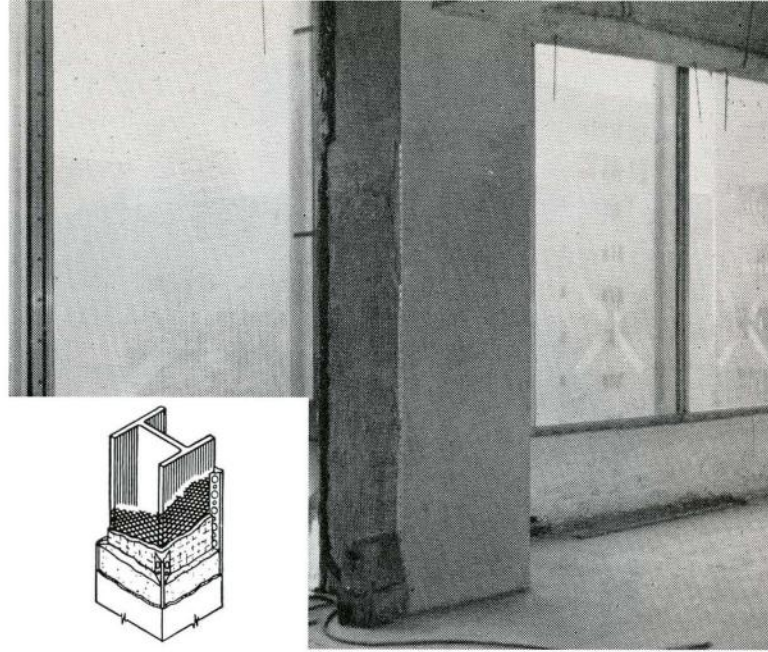
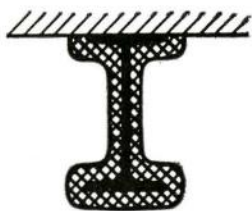
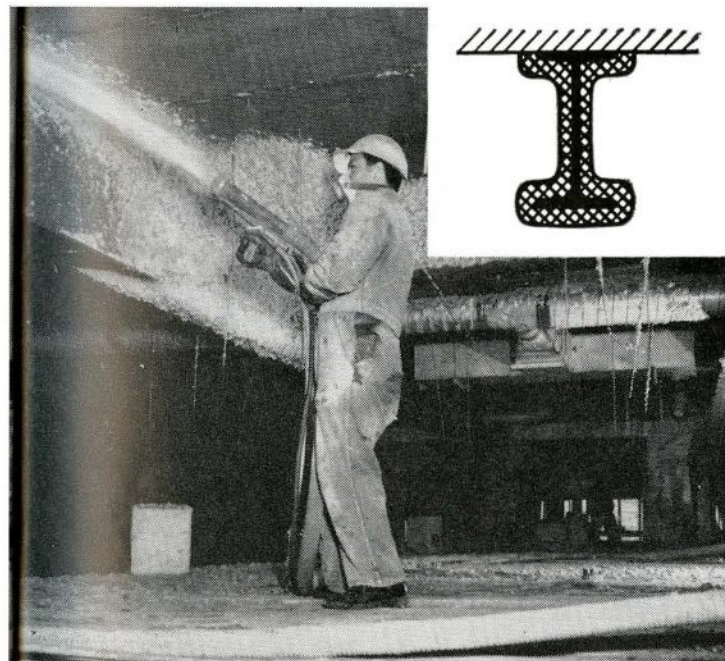
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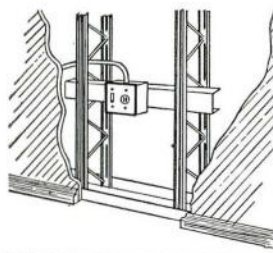
Light gauge steel cellular floor is covered with thin layer of concrete. Material is available in several shapes and sizes to suit span and service requirements. Cellular floors can provide built-in air conditioning duct, and raceways for electrical services, etc.

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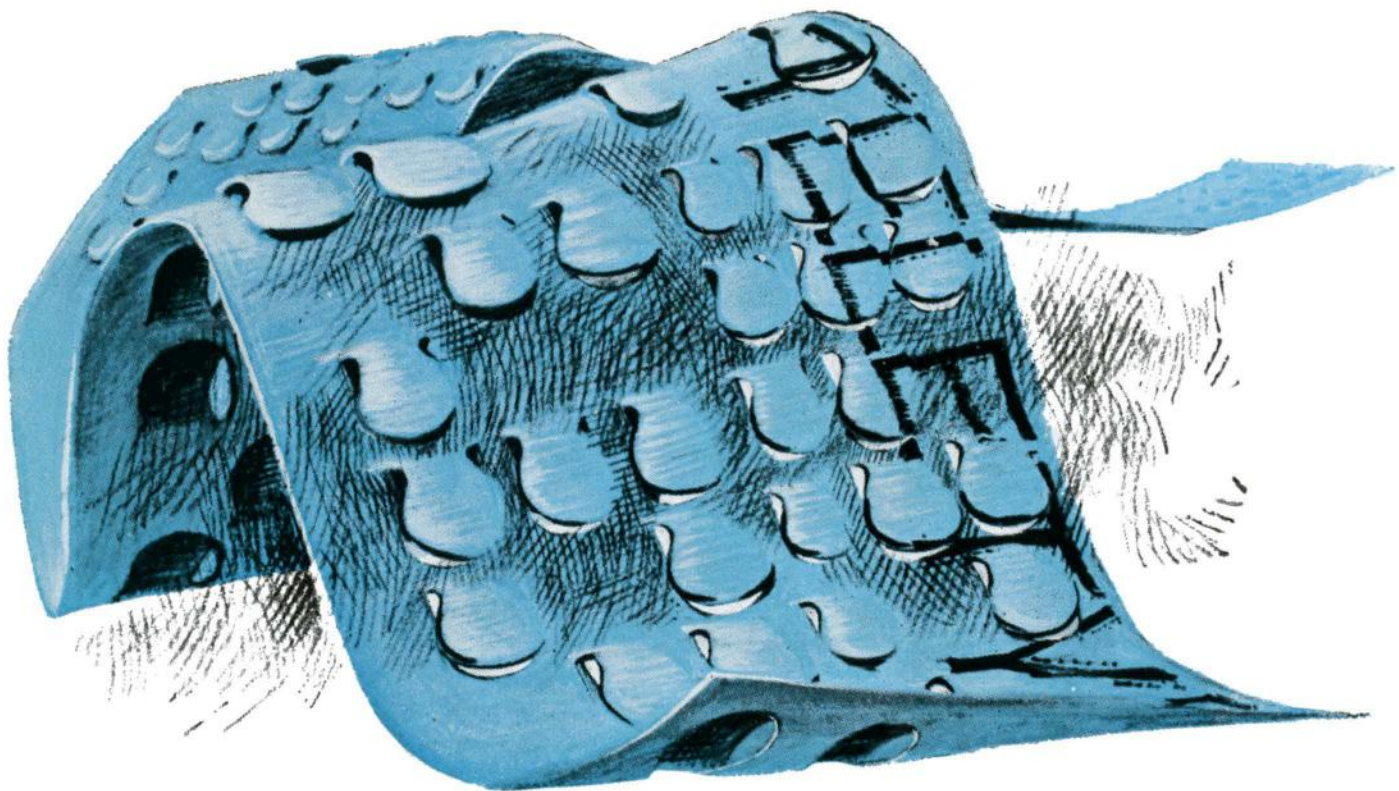
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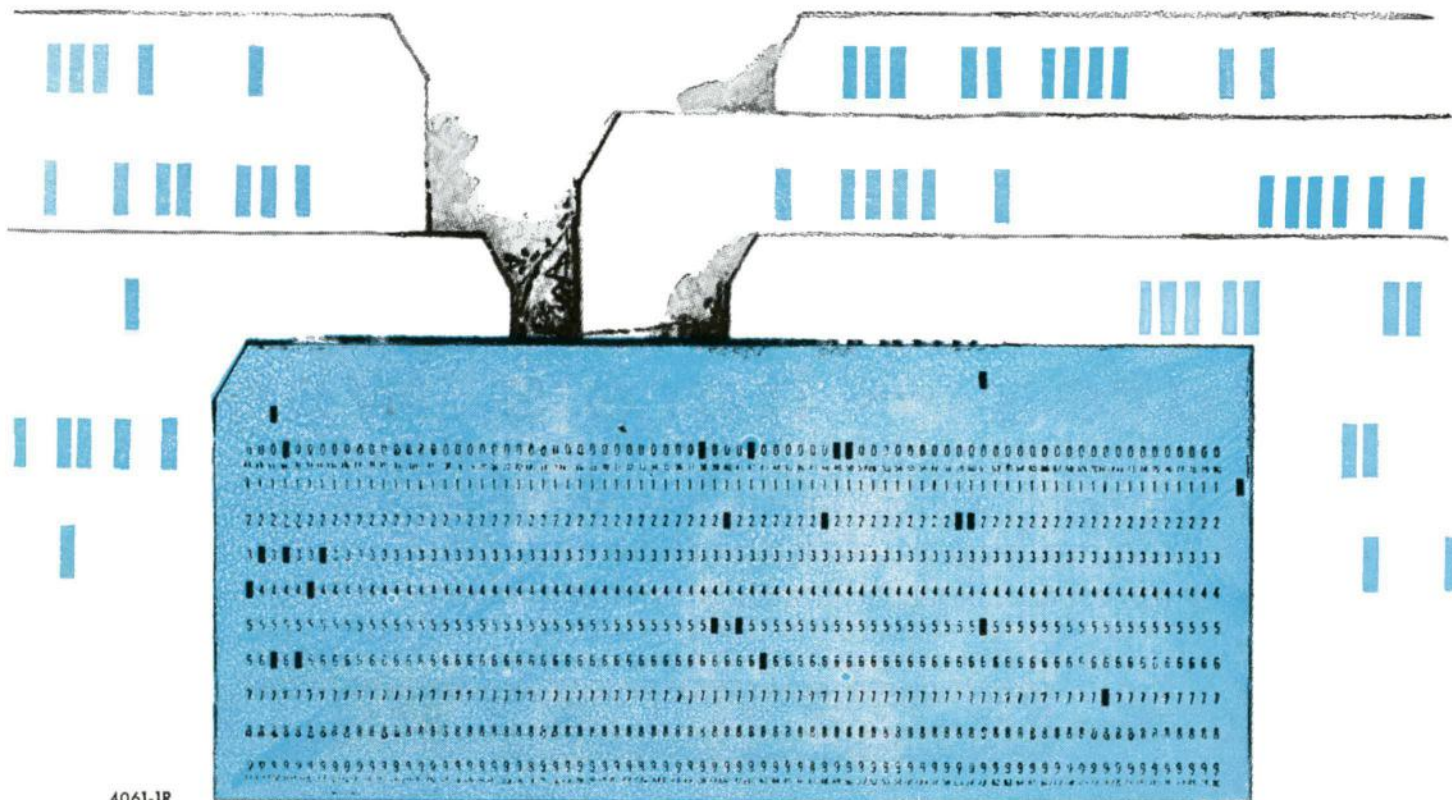
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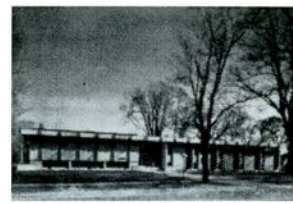
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Editorial	35
Competitions	
Project	36
Douglas Point Nuclear Power Station, Ontario	
Architect: Kenneth H. Candy	
CMHC Smyth Road Development Competition, Ottawa	
Results	37
Report of the Jury	37
The First Prize Winner	38
Fraser Watts, Toronto, Ontario	
The Second Prize Winners	45
Wm. M. Schacter and Norbert H. Schoenauer, Montreal, P.Q.	
The Third Prize Winner	51
H. A. Swanson, Toronto, Ontario	
Town Hall, Whitby, Ontario	58
Architects: Rounthwaite & Fairfield	
1961 RIBA Royal Gold Medal	65
Acceptance Speech by Mr Lewis Mumford	
From the Executive Director's Desk	69
Un Mot du Directeur Executif	70
Canadian Building Digest No. 20	61
Corrosion in Buildings by P. J. Sereda the August insert from the Division of Building Research NRC, Ottawa	
Departments:	
Book Reviews	57
Letters to the Editor	71
Institute News	71
Notices	73
Provincial News	73
Coming Events	76
Industry	76
Index to Journal Advertisers	98

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Competitions

READERS OF THE RIBA JOURNAL will have noticed that there is always a column announcing competitions at home and abroad. Prize money and jury are invariably mentioned, along with the approval or disapproval of the RIBA. There is about the list a more than faint odour of copra and sandalwood, and we have wondered at times what happened to the young men who won competitions for buildings in Singapore, Accra or Mandalay. Our RAIC list would not fill a column, and, geographically, is quite unromantic. At the same time, there are few things in life with the romantic possibilities of an architectural competition. We think of those obscure young men, Elmes and Scott, in their twenties suddenly achieving world recognition for St George's Hall in Liverpool and the Anglican Cathedral in the same city. More recently, we think of Mr Viljo Revell who, a few years ago, went quietly about his business in Helsinki. Overnight, he found himself airborne to Toronto, Canada, where television cameras, the mayor of all the people and an enthusiastic audience awaited his arrival.

It was pointed out to me that we in Canada have had more competitions in the last two or three years than in any comparable period. Obviously, it can be overdone, but the case for the public building by competition is very strong and is a traditional technique in all European countries. In Scandinavia and Switzerland it would appear that "public" is defined so broadly as to include even schools which, in England too, have frequently been the subject of important competitions. If the results had not been satisfactory, the method would surely have been abandoned, and, historically, one can think of few failures — certainly not the Houses of Parliament at Westminster or Ottawa, the old city hall in Toronto or the new one in Ottawa.

The recently revised code for competitions which the RAIC has prepared should be of great value wherever competitions are contemplated. To it we would add our own observations that nothing is so important as a carefully selected jury, and that prize money has, till now, been too low. There are rumblings that an advance of fees is not a prize, and when the cost of competing is brought to the attention of sponsors, they are usually shocked into awarding generous prizes. We were shocked ourselves to hear of a Canadian competition where one firm spent forty-five thousand dollars. Such an expenditure can never be justified, but, where even one tenth of that is spent, the integrity of the sponsor and the jury, the adequacy of prize money, and a well written set of conditions are fundamental requirements. E.R.A.

Concours

LES LECTEURS DU JOURNAL DU RIBA sont habitués à voir une colonne remplie d'annonces de concours au pays et à l'étranger. Invariablement le montant du prix et la composition du jury sont indiqués, avec l'approbation ou la désapprobation de l'Institut. La liste a une saveur nettement exotique et souvent nous nous sommes demandé ce que sont devenus les jeunes vainqueurs de concours de bâtiments à Singapour, à Accra et à Mandalay. Notre liste publiée par l'IRAC ne remplit pas une colonne et, géographiquement, elle est tout à fait prosaïque. Cependant, peu de choses peuvent avoir autant de romanesque qu'un concours en architecture. Ainsi, deux architectes obscurs, dans la vingtaine, Elmes et Scott, se sont acquis une renommée mondiale comme auteurs du St. George's Hall et de la Cathédrale anglicane de Liverpool. Plus récemment, nous avons eu le cas de M. Viljo Revell qui, il y a quelques années, accomplissait silencieusement sa tâche à Helsinki et qui, du jour au lendemain, s'est vu transporté par avion à Toronto (Canada) où l'attendaient les caméras de la télévision, le maire de la ville et une foule enthousiaste.

Il n'y a jamais eu au Canada autant de concours que depuis deux ou trois ans, dit-on. Evidemment, il est possible d'exagérer mais, dans le cas des édifices publics, la méthode offre de grands avantages et, en Europe, elle est bien ancrée dans les traditions. En Scandinavie et en Suisse, le terme "public" comprend même les écoles et, en Angleterre, beaucoup d'écoles ont été l'objet de grands concours. Si on n'était pas satisfait, on agirait autrement et, en réalité, il y a eu peu d'insuccès, parmi lesquels ne se classent sûrement pas les Edifices du Parlement à Westminster et à Ottawa, l'ancien Hôtel de ville de Toronto et le nouvel Hôtel de ville d'Ottawa.

Le code des concours, récemment révisé par l'IRAC, devrait être d'une aide précieuse sous ce rapport. Nous nous permettons d'y ajouter, à titre de commentaires, que rien n'est aussi important qu'un choix judicieux du jury et que, jusqu'ici, les prix ont été trop faibles. On signale qu'une avance sur les honoraires n'est pas un prix et que, lorsque les organisateurs apprennent le coût d'un concours, ils n'osent plus offrir des prix généreux. Pour notre part, nous avons été choqués d'apprendre qu'une maison canadienne avait dépensé \$45,000 dans un concours. C'est sûrement exagéré mais, même s'il ne s'agit que du dixième de ce montant, la sincérité des organisateurs et du jury, un montant suffisant comme prix et une bonne rédaction des conditions du concours sont des éléments essentiels.



PROJECT

The Atomic Energy of Canada Limited 200,000 kilowatt nuclear power plant now under construction at Douglas Point, midway between Port Elgin and Kincardine, Ontario.

This model shows how the station will look when it is completed in 1965. The large silo-like building will house the nuclear reactor, and its associated steam generating equipment.

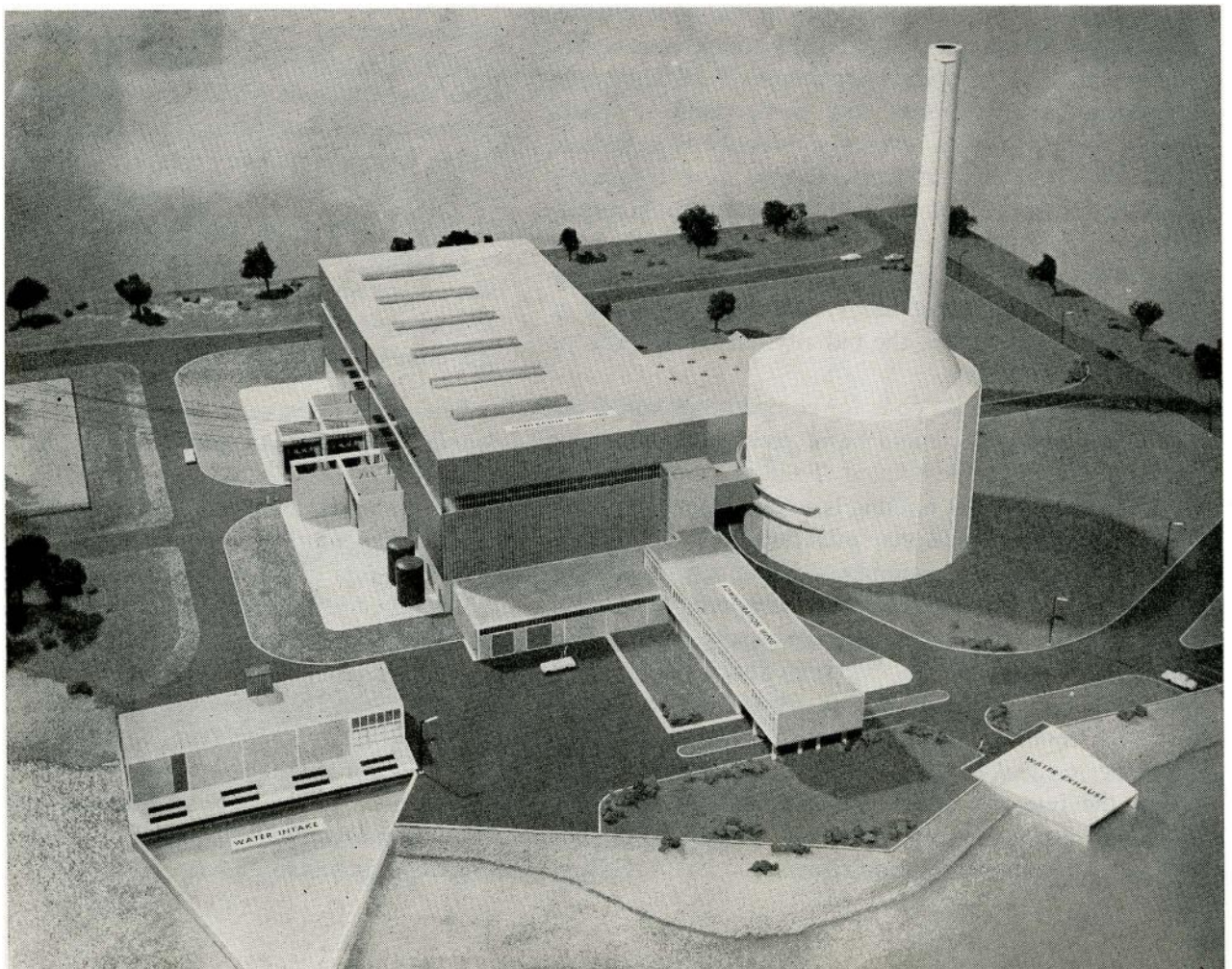
The new project, to be known as CANDU (for Canadian deuterium uranium), will employ natural uranium as a fuel and will be cooled and moderated by heavy water. Operating principles will be similar to the 20,000 kilowatt Nuclear Power Demonstration plant under construction on the banks of the Ottawa River, some 150 miles from the Capital City.

Ontario Hydro will provide the new site and place at the disposal of AECL the services of its engineering and construction organization.

DOUGLAS POINT NUCLEAR POWER STATION ONTARIO

Designed by:
ATOMIC ENERGY OF CANADA LIMITED
and
THE HYDRO ELECTRIC POWER COMMISSION
OF ONTARIO

Chief Architect
Kenneth H. Candy



CMHC Smyth Road Development Competition

OTTAWA

REPORT OF THE JURY

Last September Central Mortgage and Housing Corporation announced the first competition to be sponsored by the Corporation — the planning of a 71 acre site in Ottawa and the designing of the dwelling units, shops and other facilities within it. Prizes offered were, first, \$15,000; second, \$3,000, and third, \$2,000. On April 14 the jury reviewed the 39 entries received, announced a second stage, with special grants to meet the expenses of it, and invited five of the competitors to participate — Messrs Fairfield, Dubois, Cheney and Strong, of Toronto; W. M. Schacter and N. H. Schoenauer of Montreal; Smith Carter Searle Associates, Winnipeg; H. A. Swanson, Toronto; and Fraser Watts, Toronto. Judging of the second stage took place July 17, and the Journal presents on the following pages the three winning designs.

The Jury, left to right, seated, John Bland (F), E. R. Arthur (F), Chairman and Professional Adviser; Louis Kahn, FAIA, Philadelphia; standing, Ian MacLennan (F), Chief Architect and Planner, CMHC; Frank Ayers, MEIC, Director of Planning and Works, City of Ottawa; E. R. Collins, Chief Appraiser, CMHC; James A. Lowden, President of the Canadian Association of Real Estate Boards; and (up the tree) A. P. C. Adamson (F), Vice Chairman, National Capital Commission.



First (Scheme A) *Mr Fraser Watts, Toronto*

Second (Scheme E) *Messrs W. M. Schacter
and N. H. Schoenauer, Montreal*

Third (Scheme D) *Mr H. A. Swanson, Toronto*

THE JURY was all but unanimous in its decision to place 'A' first. The Competition was a difficult one to judge in view of the many skills which the design demanded. Sometimes, the overall plan had distinct merit, but the quality of the architecture which complemented it was such as to rule out the competitor as a possible choice. Alternatively, quite striking buildings in some cases, were let down by an indifferent planning concept. It is possible that some competitors divided their responsibilities and that the planner was not always in touch with his colleague designing the housing.

'A' gave no such impression. His plan and his houses of all types were a complete whole and complementary. Particularly were the Jury captivated by his obvious qualities of sensitivity and conviction. His architecture is marked by a certain anonymity free from the clichés of modern house design, and by a quite charming modesty that should make his dwellings in all categories attractive to a wide and diversified section of the general public. Coupled with the skill he shows in individual design, is his ability to vary his buildings in position and in relation to one another.

In keeping with the desire of the Corporation that the Competition should produce a scheme that showed imagination and not a little courage on the part of the designer, the scheme 'A' has several features that will attract architects in the housing field from many places when it finally achieves realization on the Smyth Road site.

Not the least of these is the underground parking, which is a feature of the project. The practical advantages of having a car convenient to the dwelling and protected from the weather are obvious, but the aesthetic and sociological effects are more profound, and, perhaps, more subtle. The result over many acres of a housing estate, will, in the opinion of the Jury, create an atmosphere of urbanity, rare in such projects. They observed, too, that while A's scheme gives more than usual recognition of the place of the motor car in modern life, it provides areas of safety, of pedestrian precincts, where the family can find security and dignity that the motor car has done much to destroy.

Parallel with A's concern for the family, and children in particular, in their external activities, is his generally sympathetic understanding of the living requirements of the people who will occupy the houses. However, three and a half storey houses were criticized along with an

excessive number of houses with interior entrance steps. The Jury felt, as well, that the high apartments would benefit by some further study.

On the other hand, both the location and axis of these apartments at the South end of the project, were thought to be admirable. It is also to A's credit that, unlike many other schemes in the Competition, his high-rise buildings did not overpower or over shadow the single and row houses in the vicinity, either by height or proximity.

Shopping, nearby, was considered well located both for the people in the housing estate and for those on the other side of Smyth Road. While not concealed from the road, it is pleasantly screened by trees.

We have become accustomed to the housing of elderly people in projects devoted entirely to their requirements, or in "compounds" in housing schemes for mixed aged groups. The Jury welcomed the idea in 'A' of the integration of the elderly with the younger groups on the estate. At the same time, they recommended that a change in their location to a southerly section would bring them closer to shopping and the local bus.

Some criticism was levelled at the shape of the school site; and the closeness of the school building to the adjacent single family houses to the North was considered undesirable. Note, too, was made that certain road loops and culs de sac would require modification.

If, in the overall design, this competitor would seem, at times, to have given precedence to the quality of the housing content of his scheme at the expense of needed relief in the disposition of open space in his overall pattern of land use, it must be remembered that the competitor has worked at a disadvantage without that collaboration with the client, so necessary for a mutually satisfactory solution.

The Jury has every confidence that A's proposal has in it the material for a first class housing scheme, and one that will contribute significantly to progress in the housing field in Canada.

The experiment which the Corporation undertook through the Smyth Road Housing Competition would seem to have been more than "justified".

SCHEME 'E'

E's proposals are particularly noteworthy for the way in which he integrated housing types of all categories throughout his scheme. His buildings are modest in scale and no where was there evidence of straining at dramatic architectural effect. If his scheme failed to demonstrate the "high degree of imagination" expected of the Competition, it was, nevertheless, a straight forward and not uninteresting solution to the housing problem.

SCHEME 'D'

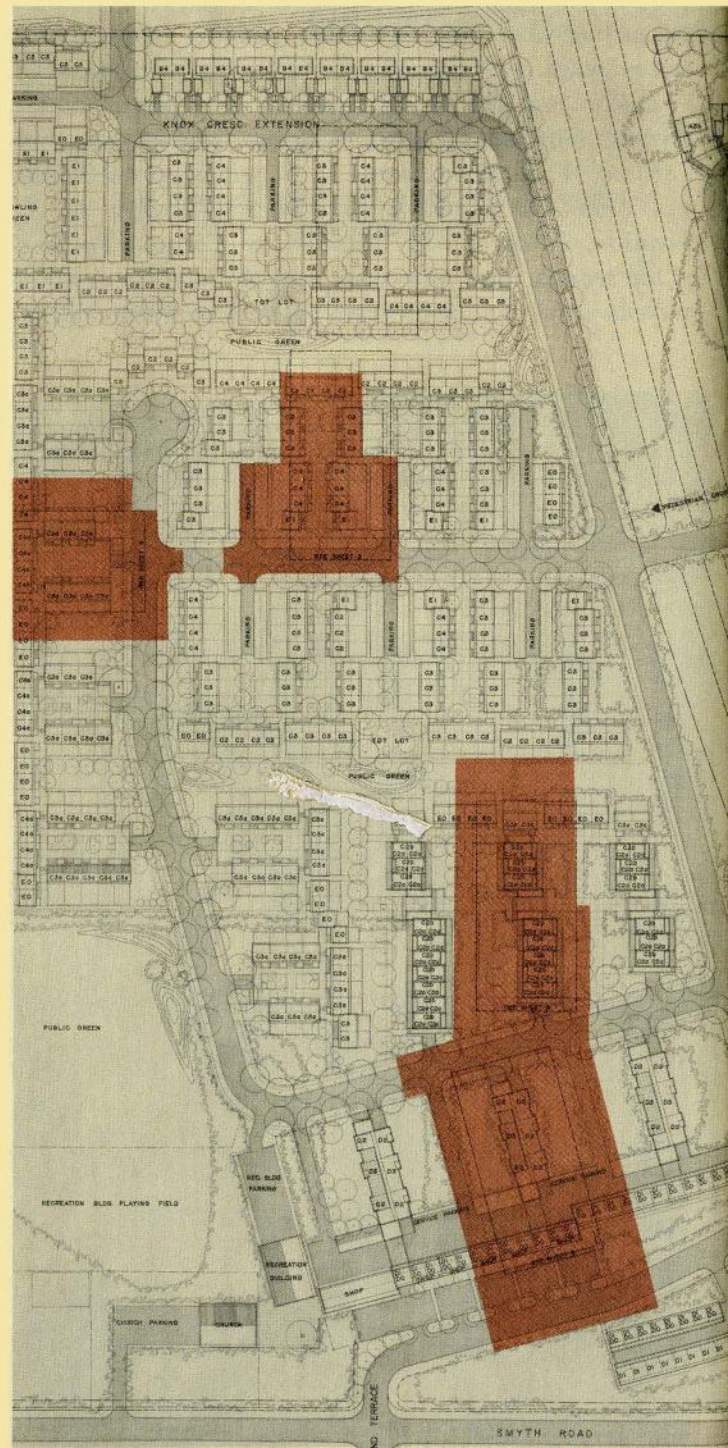
'D' presented a well defined street pattern to which all houses have immediate access. His is a romantic solution with many fine qualities offset somewhat by extensive areas of asphalt. These dominate and affect adversely the sensitive and poetic effect which is so marked a characteristic of his highly personalized architectural design. The Jury felt the scheme, as a whole, lacked the conviction and authority necessary for the development of such a large scale undertaking.

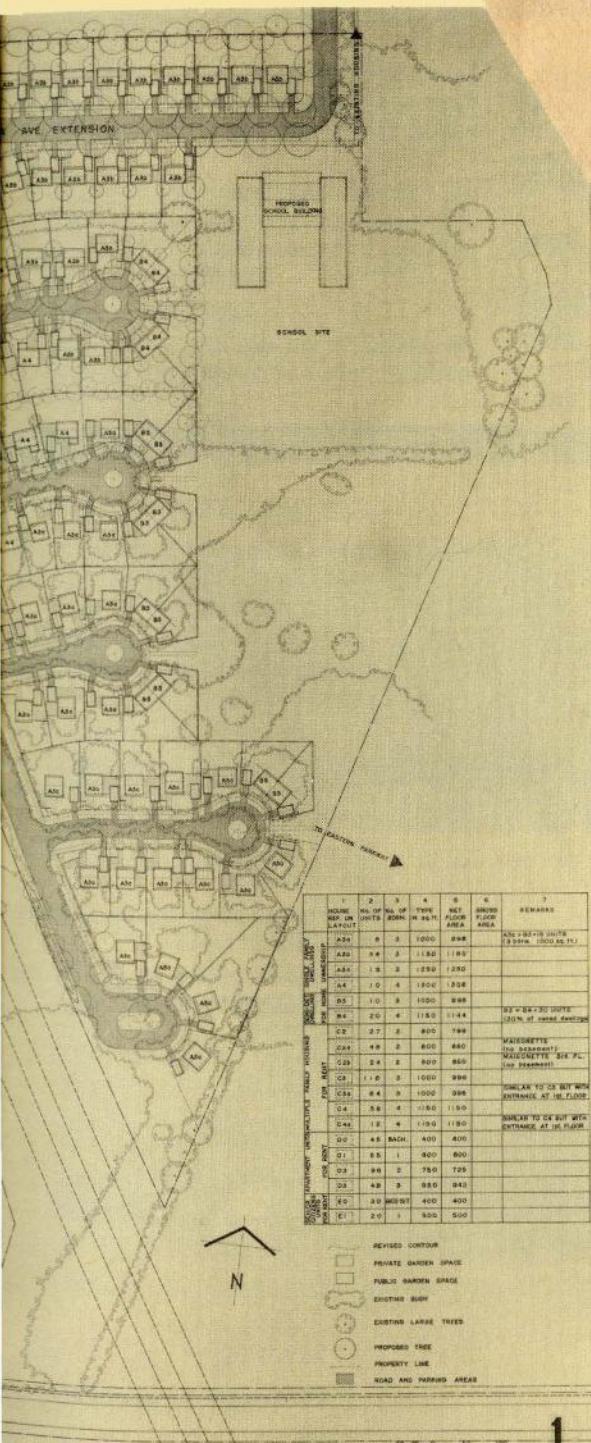
SMYTH ROAD COMPETITION 1st Prize Winner

FRASER WATTS received his early education at the Danforth Technical School in Toronto and after leaving high school was employed for two years with the Toronto architectural firm of Marani and Morris (now Marani, Morris and Allan).

Mr. Watts has studied at Stanford University in California, following a liberal arts course, and at Yale University. He attended the Architectural Association in London, England, for two years, and in 1953 received an Architectural Association diploma. He was elected as an Associate of the Royal Institute of British Architects in 1954.

Mr. Watts was a partner in the architectural firm of Moriyama and Watts and later entered into private practice on his own account. He was awarded this year a Canada Council Scholarship to study at Harvard University in the graduate school of design for his Master's degree in landscape architecture.





GENERAL PLANNING

On site A, a road connects Knox Crescent, Smyth Road and the proposed Station Boulevard. This road, because of the relatively heavy traffic it will carry, skirts the housing development and consequently does not conflict with pedestrian movement to the school, community and shopping areas. A loop road from the main through-road serves the housing area.

On site B, the road which connects Balena Avenue to the proposed Station Boulevard is located so as not to interrupt pedestrian movement from the housing area to the proposed school grounds and Eastern Parkway. The housing of site B is served mainly by roads which are "dead ends" to vehicles, but which are open to pedestrians and provide access to the school site and the Eastern Parkway.

On both sites A and B, pedestrian ways are separated from busy motor ways.

The housing of sites A and B is separated from the proposed Station Boulevard by the collector road and by dense existing bush, proposed plantation, and soil mounds.

UNITY OF SITES A AND B
Unity is established by landscape continuity

Existing bush bordering proposed Station Boulevard is preserved, and with additional planting and berms, contains the highway and screens the housing on both sites.

Architectural details common to development on both sites (roof slopes and colour, brick colours, forms) would, when seen through the bush screen from the highway, suggest unity of sites.

SEPARATION OF OWNED AND RENTED UNITS

Clear demarcation of areas maintained by municipality, by landlord, by tenant, and by owners of individual house and lot.

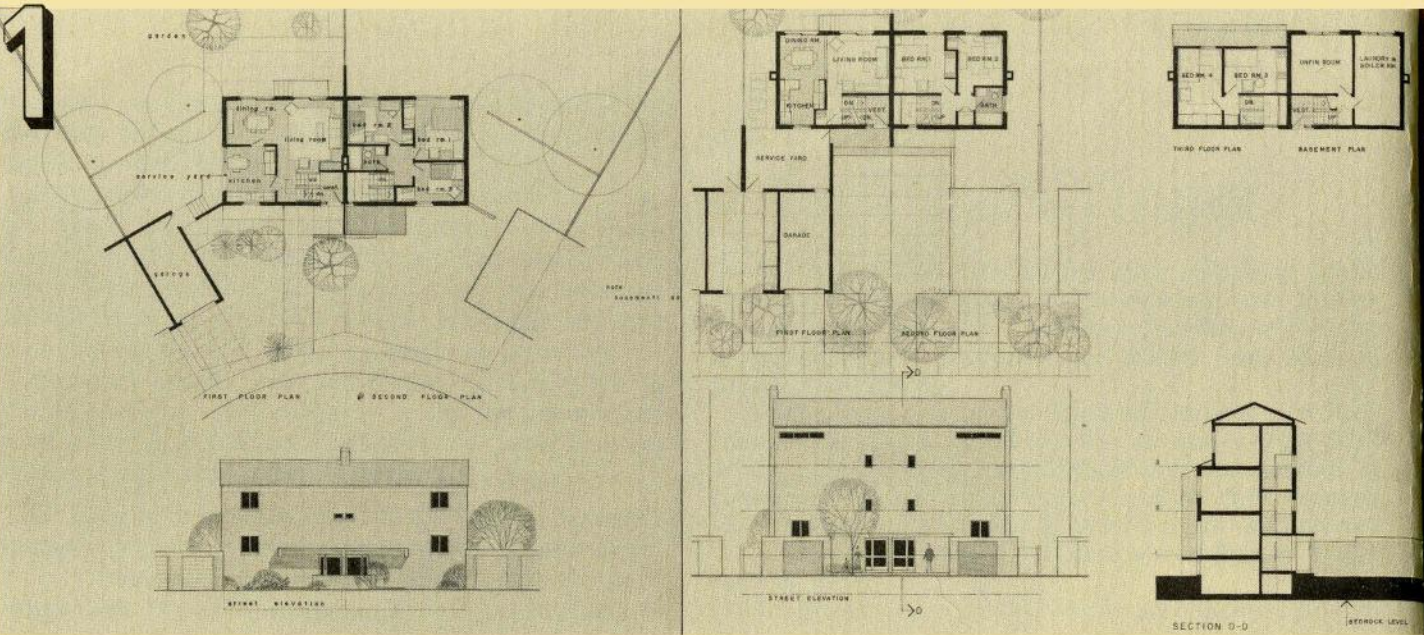
LOCATION OF SHOPPING, RECREATION AND CHURCH AREA

Located conveniently on main through-road (does not disturb housing area).

Convenient to site A by road and by foot.

Serves the large area of existing housing to the south of Smyth Road.

Grouping of shops, recreation building, church and green provides a "centre" for the development on site A and provides a useful transition from the individually owned houses to the south of Smyth Road to the apartments and rented housing of site A



SEMI-DETACHED THREE BEDROOM TYPE B3

SEMI-DETACHED FOUR BEDROOM TYPE B4

SITE PLANNING OF PRIVATELY OWNED DETACHED AND SEMI-DETACHED HOUSES

Garages placed 12 feet back from front property line.

Garages form forecourt for each house, and screen service and toddlers play area which are located behind them and adjacent to the kitchen.

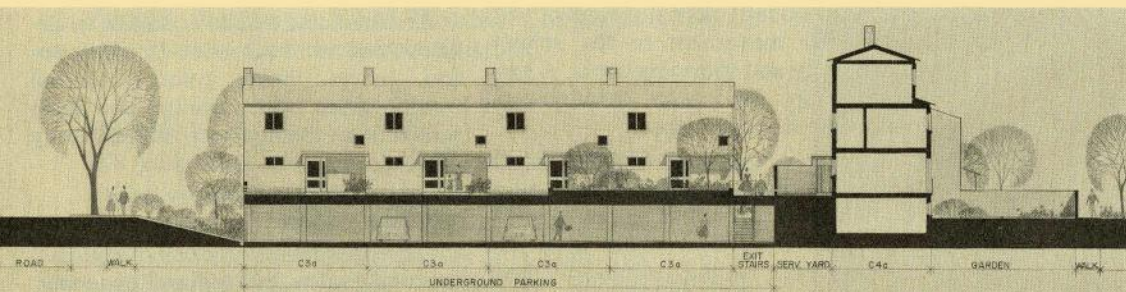
A service yard is provided which connects directly with the kitchen and the street.

The service yard is not overlooked by immediate neighbours (blank face of neighbouring wall).

Kitchen located to overlook street, front entrance and service yard.

Back garden is enjoyed from living room, dining room and bedrooms.

A spinney of trees is formed to separate back garden from back garden (from existing bush or new plantation).



COURTYARD ELEVATION D-D (SEE PLAN PAGE 42)

COURTYARD HOUSING

Each unit has small, enclosed private garden overlooked by living, dining and bedroom areas.

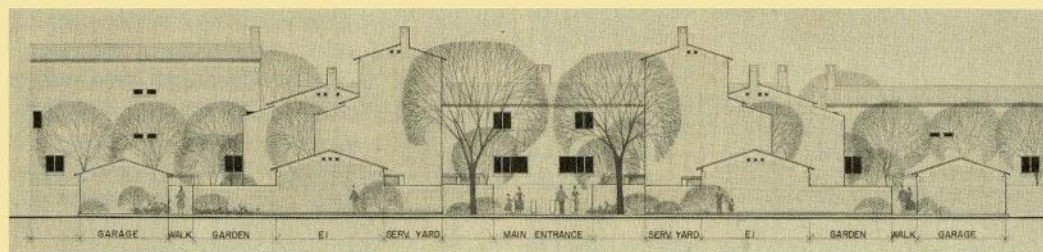
Each unit has an enclosed service yard and entrance terrace on the courtyard side.

Units are grouped around courtyards which are paved and serve as kitchen-supervised play areas free from motor traffic.

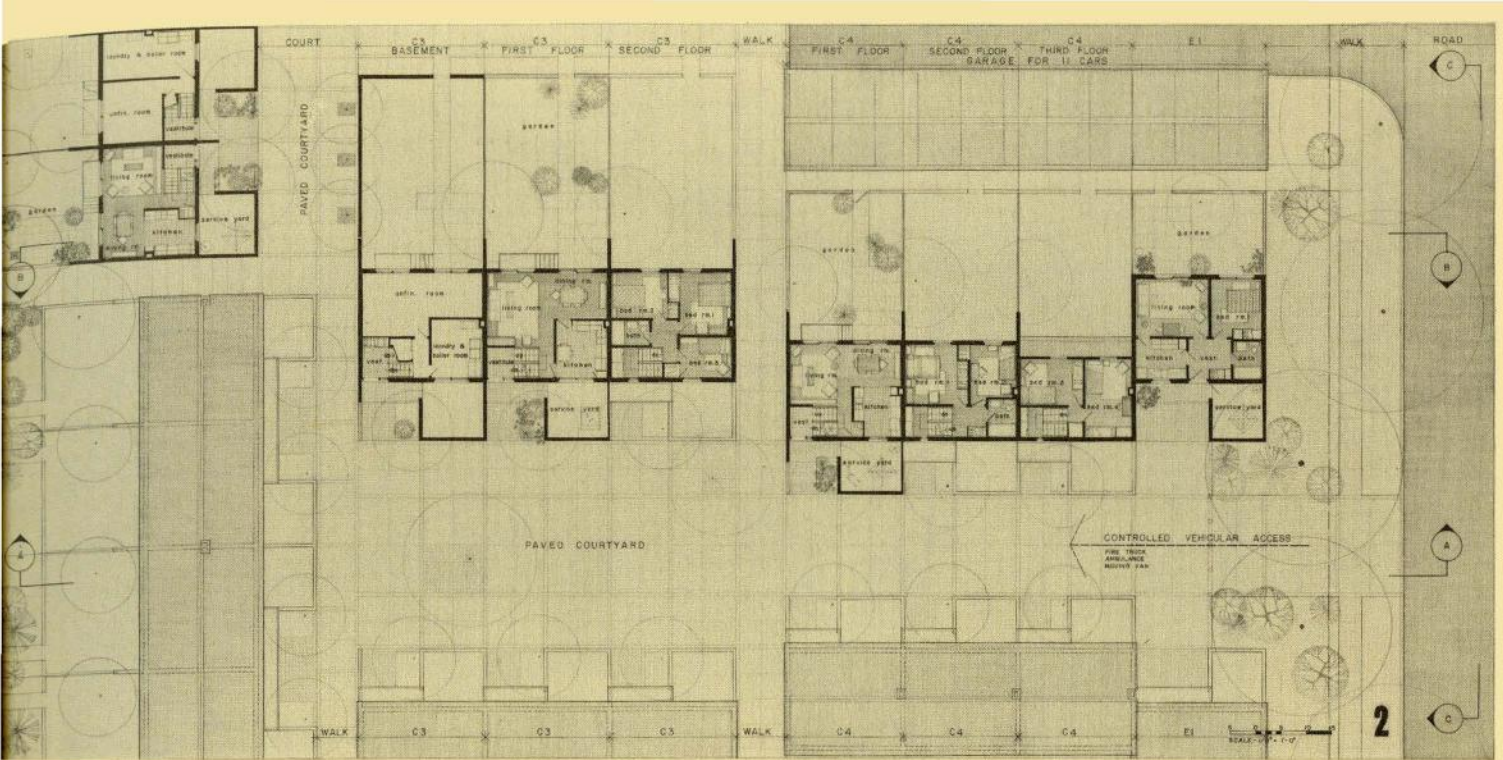
Units are individually heated by gas or fuel oil.

Courtyards vary in the arrangement of unit types.

Controlled emergency vehicular access to courtyard housing.



STREET ELEVATION C-C (SEE PLAN PAGE 41)



VIEW OF SITE FROM PROPOSED HIGHWAY BRIDGE OVER SMYTH ROAD

Low blocks of apartments are screened by preserving and encouraging bush growth at the south-east corner of site A.

The high apartment blocks are markers above the trees and announce the housing development to Station Boulevard motorists.

SOIL CONDITIONS

(the shield of bedrock covering the site strongly influences the design of buildings on it).

First floor of housing (owned and rented) is approximately four feet above grade to provide desirable basement space, and permit sewage lines to run above the rock level.

PAVED PEDESTRIAN AREAS

Required in a climate such as Ottawa's and particularly in areas of high density housing where one foot follows quickly upon another.

Serve as emergency vehicular ways.

CONSTRUCTION AND MATERIALS

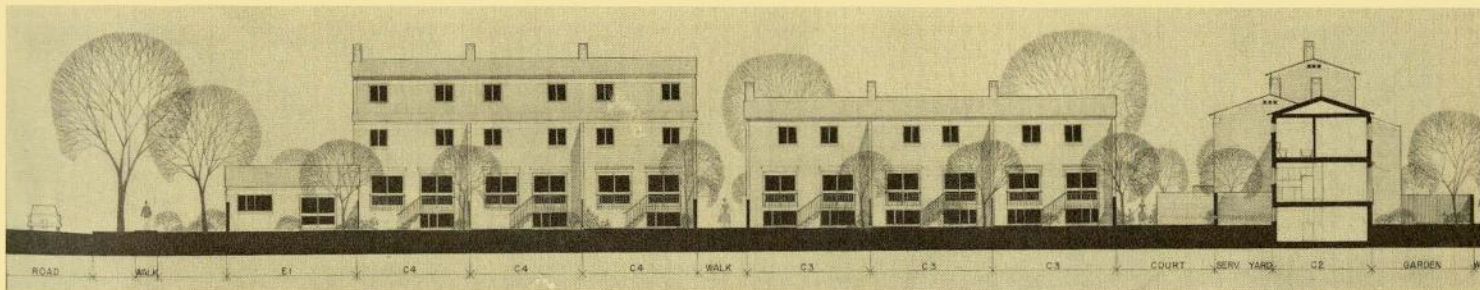
(Detached, semi-detached, courtyard and terrace housing).

Concrete block foundation walls.

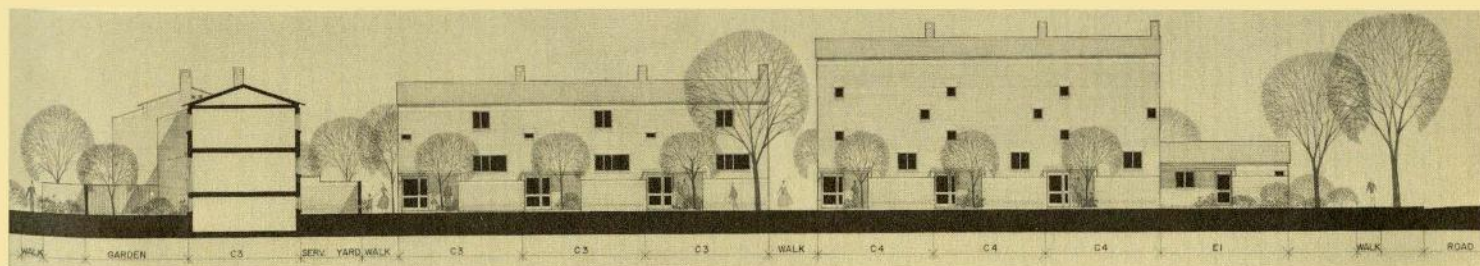
Smooth faced brick load bearing walls. Timber joists, rafters, partitions, floors (standard construction).

Precast concrete lintels, copings, ventilator grilles, chimney caps, gable blocks, canopy supports, paving. Metal sash.

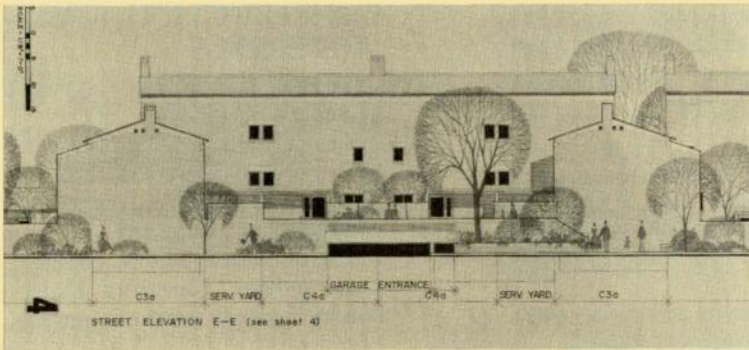
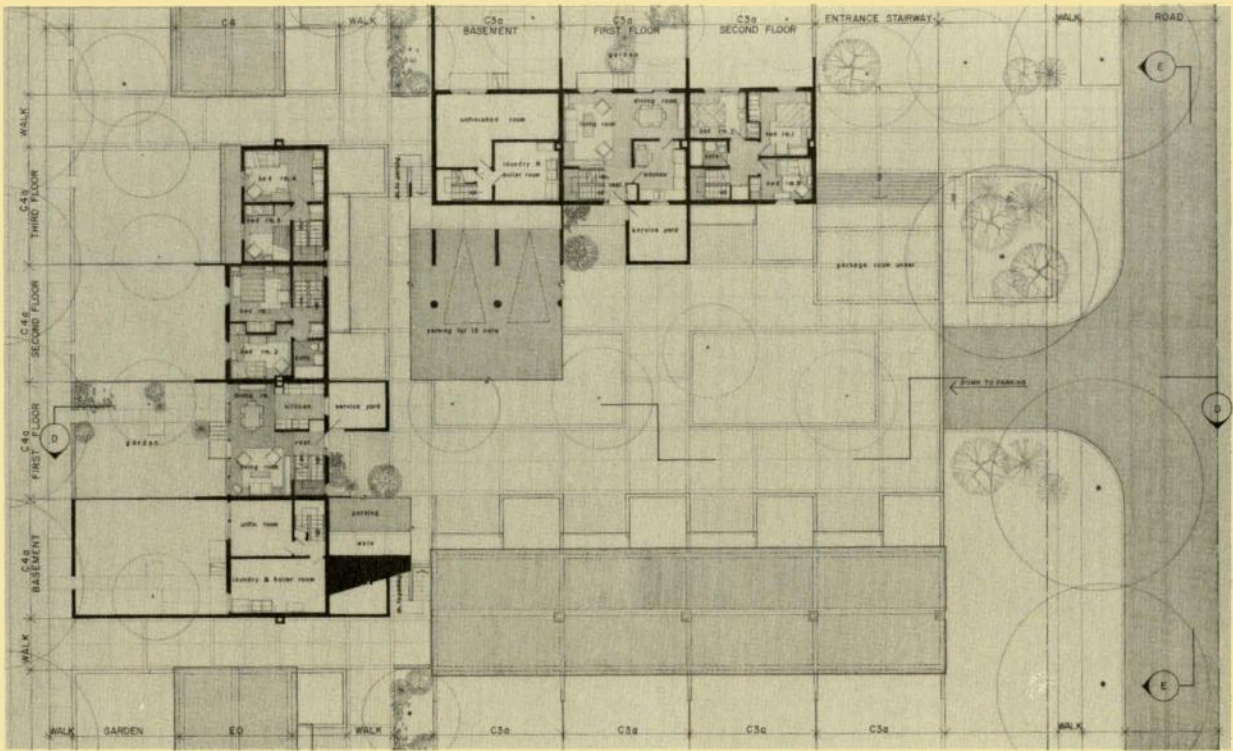
Corrugated cement-asbestos roofs.



GARDEN ELEVATION B-B (SEE PLAN ABOVE)



COURTYARD ELEVATION A-A (SEE PLAN ABOVE)



STREET ELEVATION E-E (SEE PLAN ABOVE)

SENIOR CITIZENS

Some integrated into courtyard developments, and are located near entrances to courtyard (parade quality).

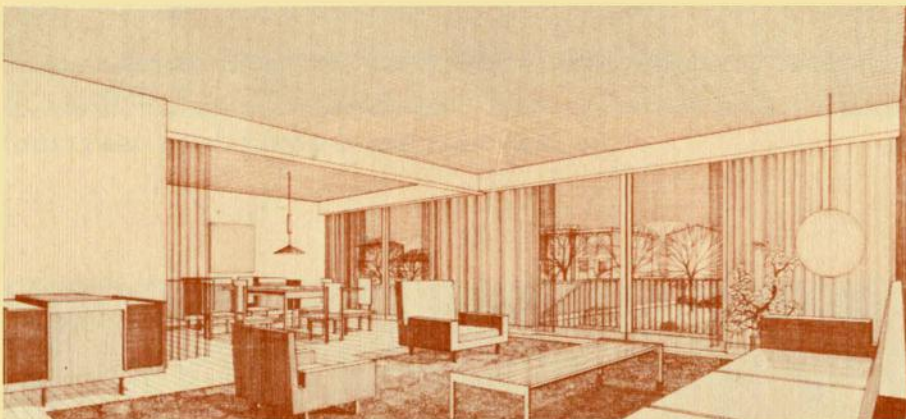
Some arranged as community around bowling green.

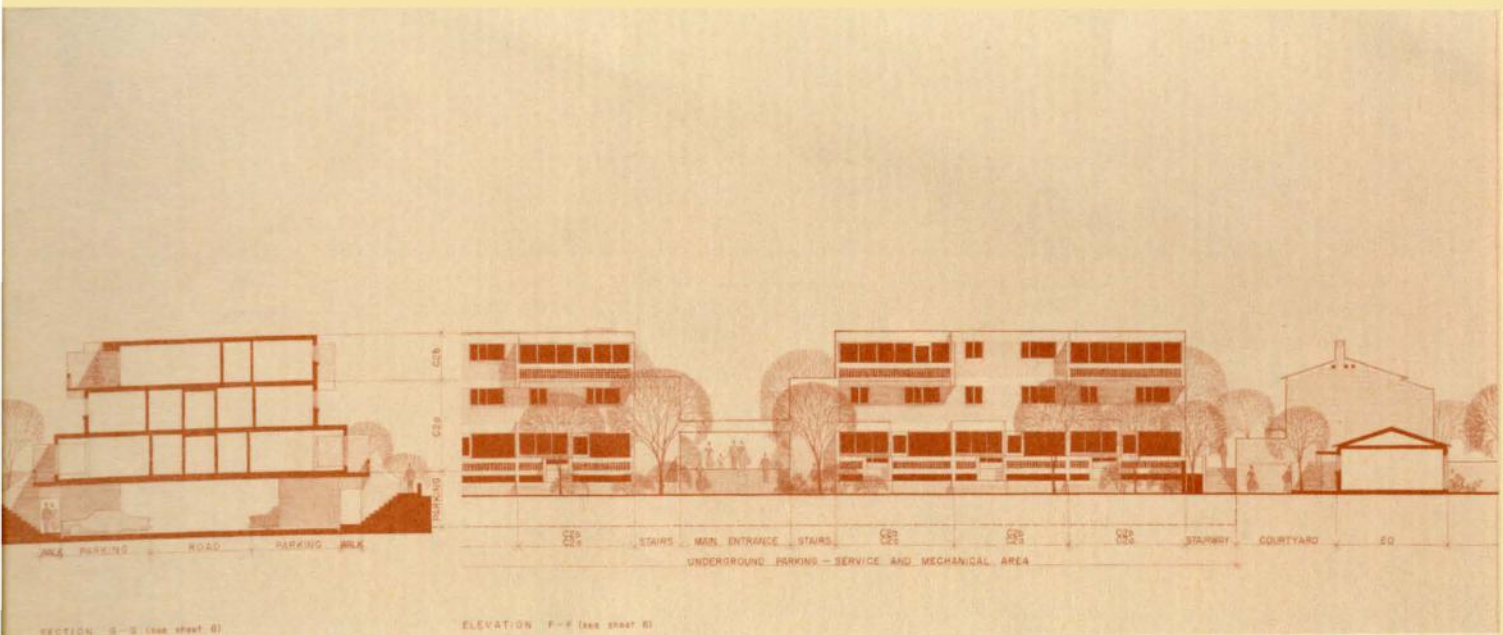
Unit is without basement, is single storied, and is on grade.

Small garden.

Service yard and entrance terrace.

Heated electrically to simplify maintenance.





SECTION G-G (SEE PLAN BELOW)

ELEVATION F-F (SEE PLAN BELOW)

PARKING AREAS

No car farther than 150 feet from dwelling.

Below-courtyard parking provides space for courtyard houses and adjacent terraces.

Below-maisonette parking provides space for maisonettes, service parking and parking for adjacent terrace housing.

Two floors of parking plus garage parking and service parking serve high apartments.

Under-building parking at road level serve low rise apartments.

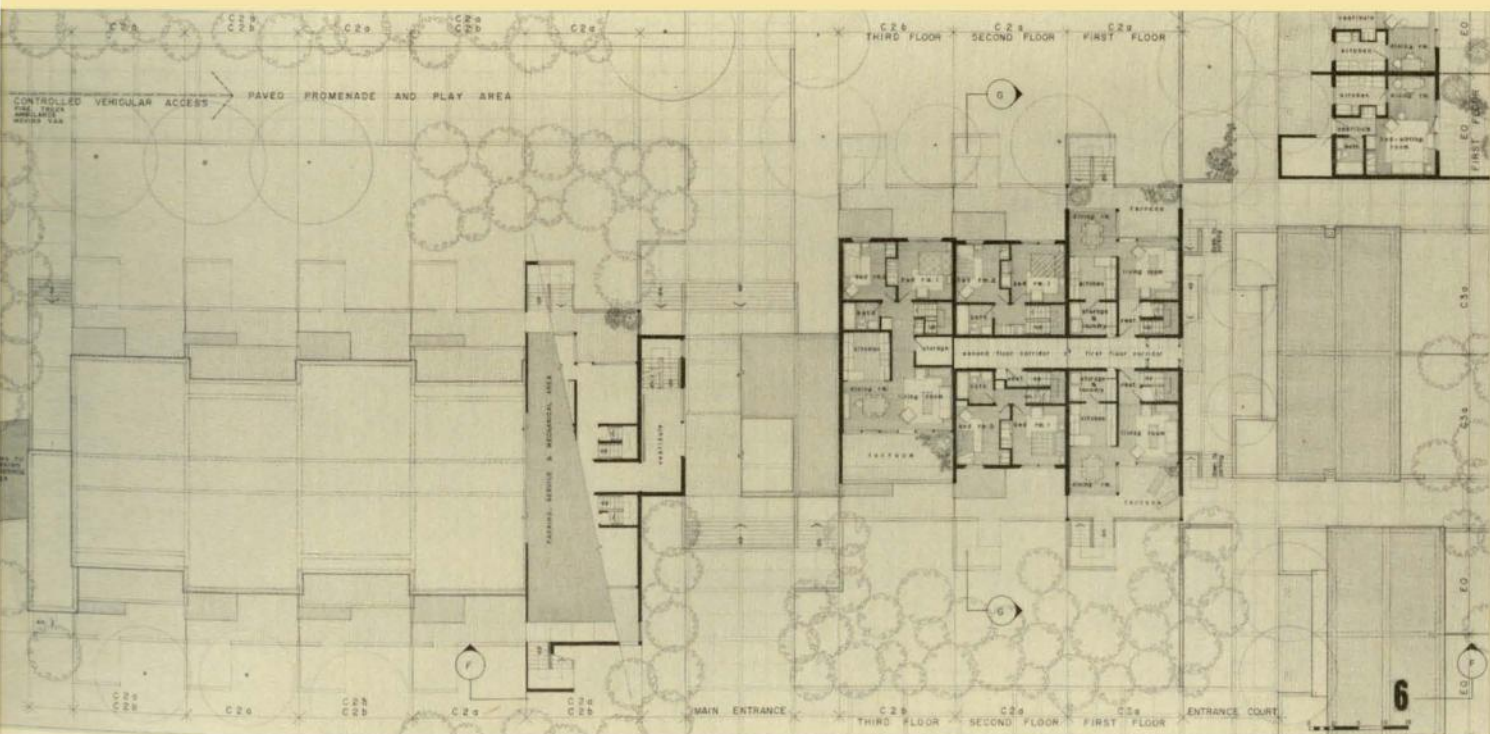
MAISONETTES

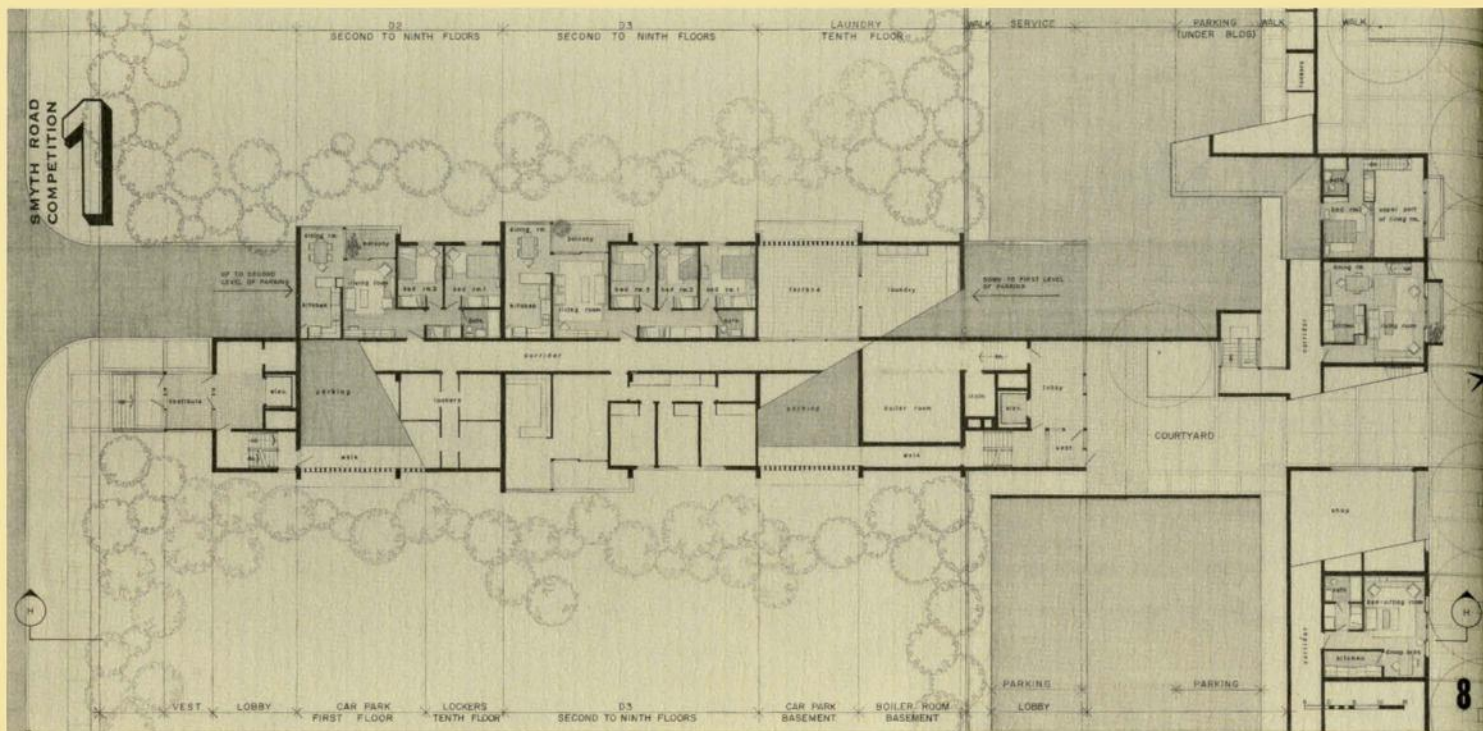
Two bedroom units only.

Direct access to lower units from under building parking and to park area.

Service and mechanical areas under building.

Overlook park, paved promenade and play area which serves as controlled vehicular access to development.





HIGH RISE APARTMENTS

Entrance from roadway to the north and from entrance courtyard connecting to low rise apartments and shopping area.

Widely spaced for privacy. Balconies spaced for privacy (no dividing partitions).

Balconies open to south-east and south-west.

Located so as *not* to overlook private gardens.

CONSTRUCTION AND MATERIALS

(Apartments and maisonettes)

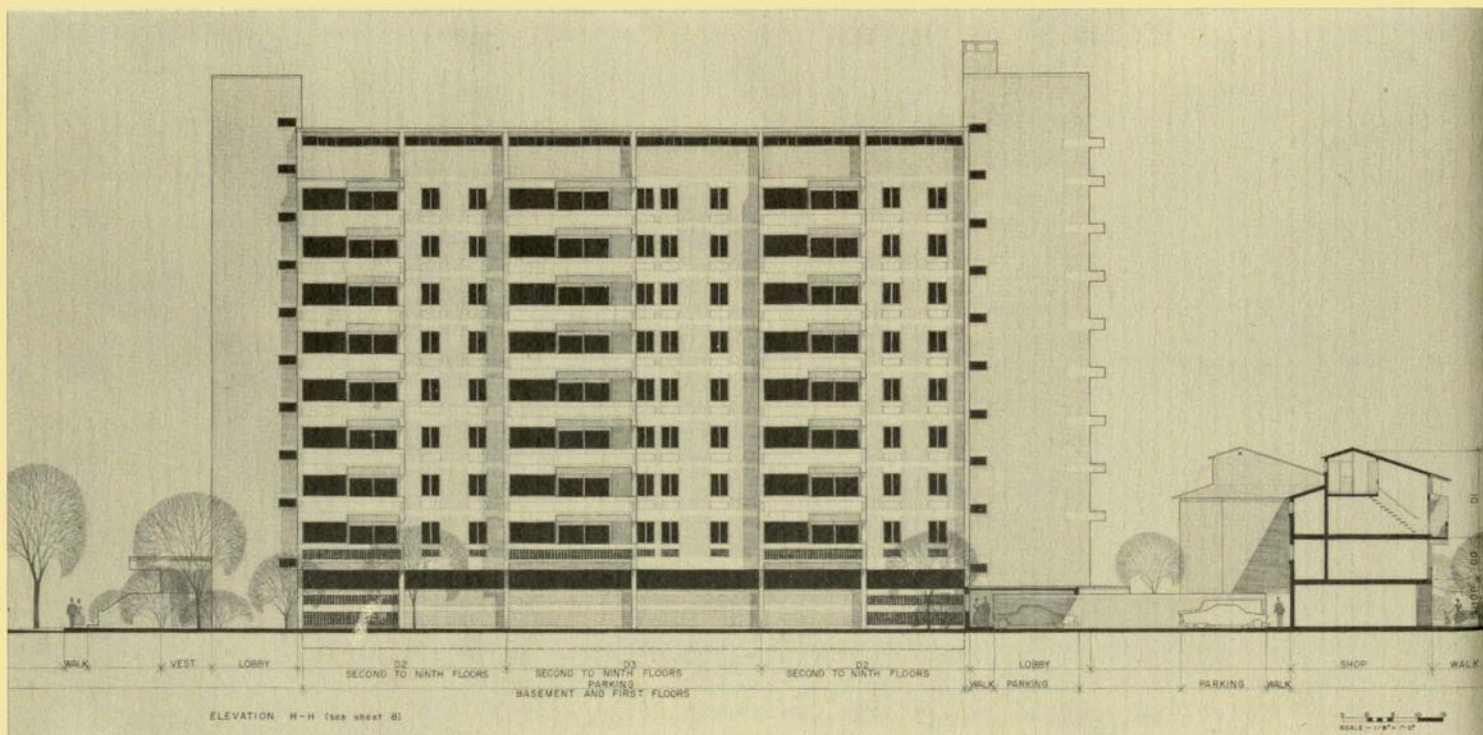
Concrete frame.

Brick panel walls.

Built-up roof.

Corrugated cement-asbestos roofing.

Precast concrete balcony grilles, lintels, copings, paving blocks.



ELEVATION H-H (SEE PLAN ABOVE)

Concept

A blending concept excluding economic extremes with minimum segregation and diversified mixing (uniform mixing of family types including old age habitation, owners and tenants).

Groupings are non-extended, contained within, and define the existing land enclosure structure, progressing in transitional continuity with the surrounding neighbourhood pattern in terms of density, scale, and form.

Landscape

The natural individuality of the site has been enhanced by reflecting the existing land enclosure system and topography, in the road pattern and land subdivision.

Such natural features as rock outcrops, boulders, stonehedge enclosures, glens, etc., have been selected for retention to achieve intimacy and surprise in minor details. Wherever possible pedestrian ways and play lots have been placed along or within such areas.

Existing trees have been retained extensively

to serve as backdrops, screens, noise barriers, as well as secluded sheltered enclaves in public open spaces. Very little tree planting would be required.

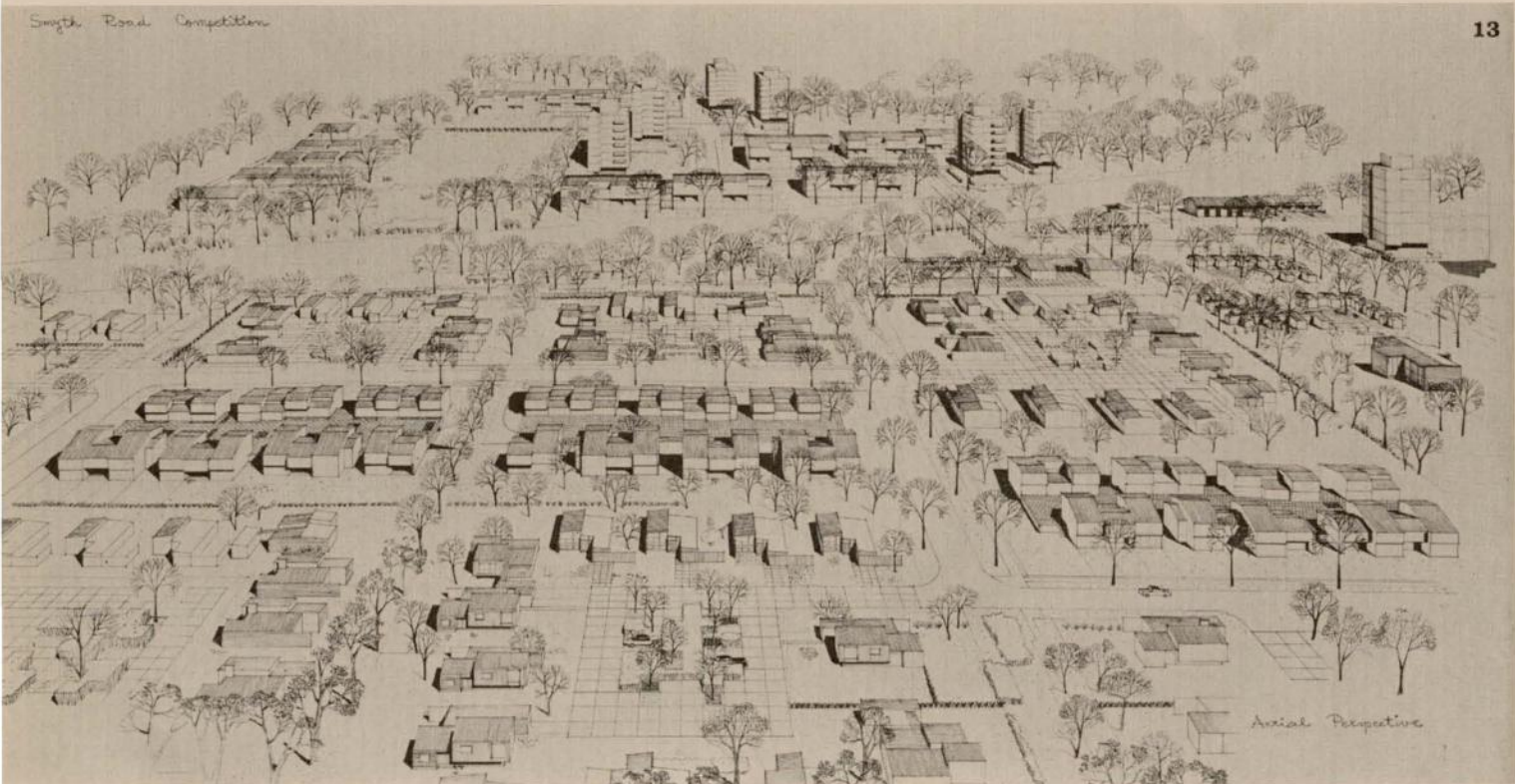
Visual seclusion and identity of private residences through grouping in off-street courts are complimented by use of hedge screens and portal identification of varying character at entrances to courts. Property lines have been visually softened to relieve a sense of tight enclosure. Courts, in all cases, are extensions of the public right of way.

Surfacing of courts and sidewalks is textured and coloured throughout.

Resident parking lots are depressed and placed to take advantage of existing contours. Surrounding retaining walls are in character with existing stonehedges.

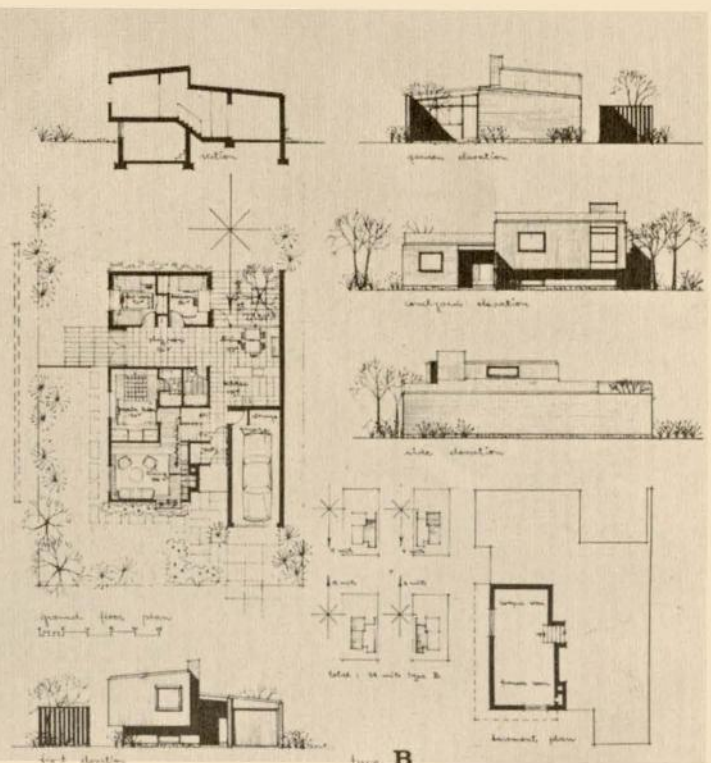
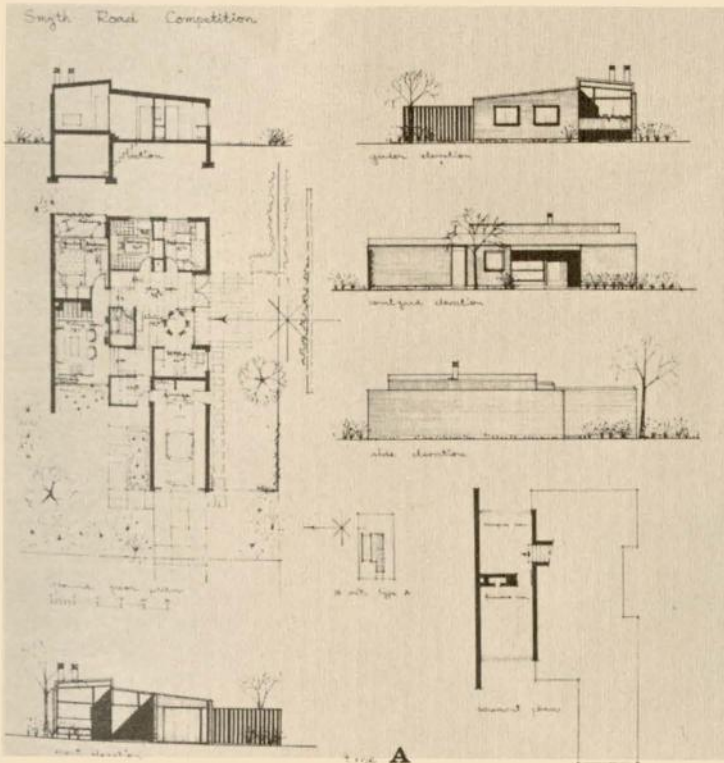
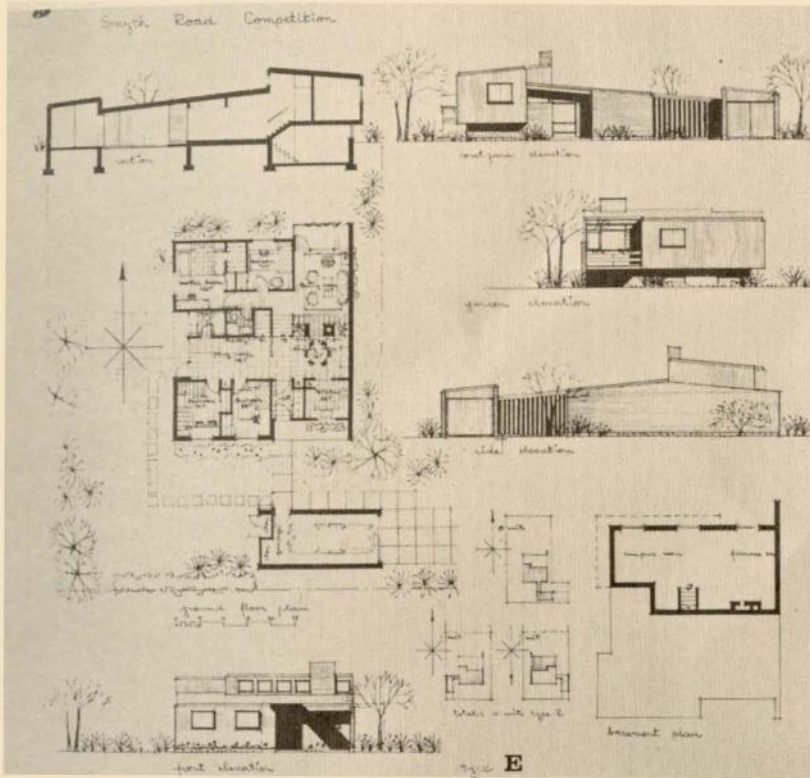
Sidewalks are placed on one side of the street only for economy and minimum crossing, and may serve as cycle paths.

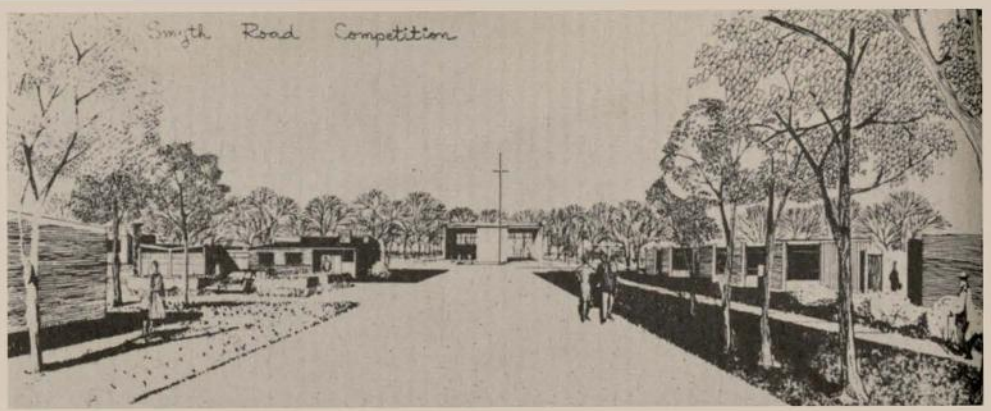
All street furniture and varied details of street lighting (colour, brightness, etc.) would be designed and placed to achieve dramatic and intimate effects by day and at night.





TYPICAL CLUSTER DEVELOPMENT





SMYTH ROAD ENTRANCE

Parking

Provision has been made for 100% resident parking in basement garages and parking lots where indicated on the plot plan. All single family residences have attached or detached surface garages.

Visitors parking is provided for in off-street courts. Parking on collector streets is reduced to a minimum.

Central areas of parking courts can be used for snow piling when necessary.

Service access is confined to off-street courts and parking lots.

Service

Street lighting varies in intensity, brightness, and tone to suit particular areas.

No pumping stations would be required in this development for sanitary and storm sewer servicing.

Multiple family units Type F and Senior Citizen units can be heated individually or collectively.

Provision for washer-dryer com-

bination unit in vestibule closet, and additional locker storage space in garages has been made for Senior Citizen units.

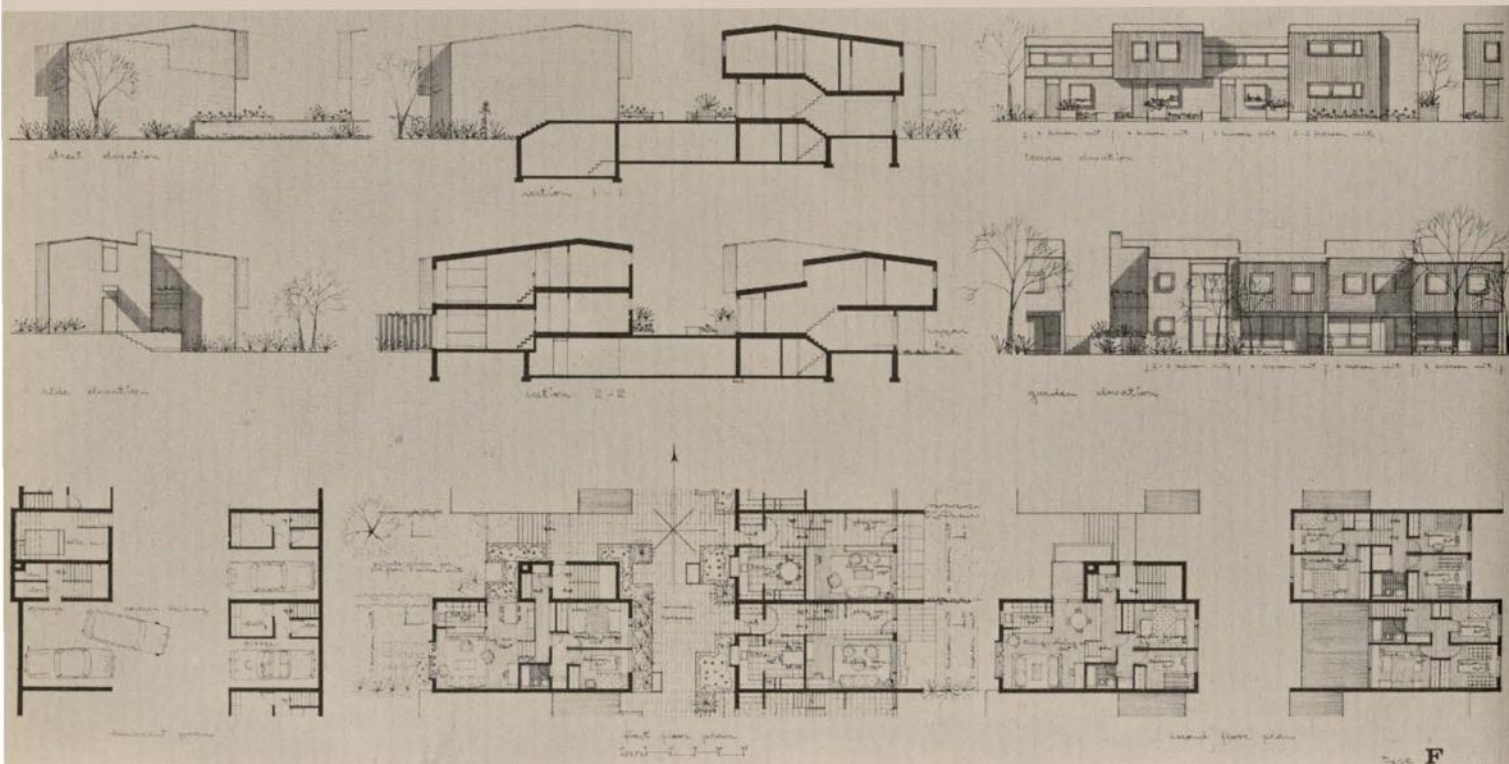
All multiple housing units and apartment blocks have been provided with incinerators for garbage disposal.

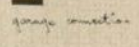
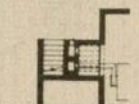
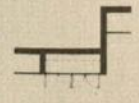
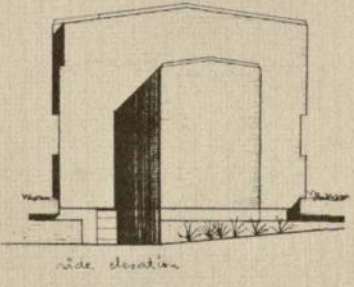
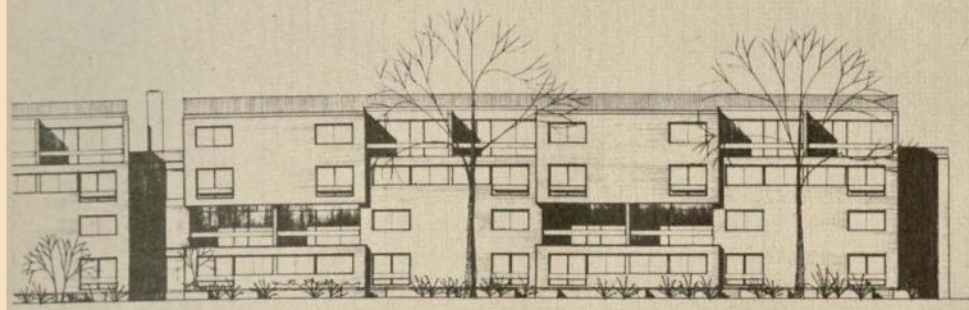
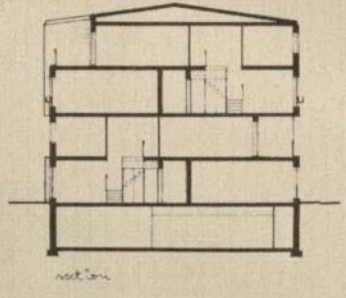
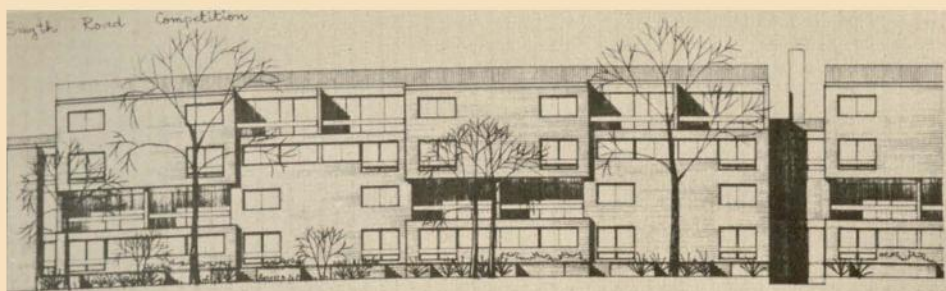
Structure

All single family residences are of standard wood frame—brick veneer construction with concrete foundations. Similar construction applies to multi-family units Type F.

Multi-family dwellings Type G are of concrete block bearing party walls, continuous poured lintel and slab type construction, brick and block backing exterior walls.

Apartment blocks Type H and J are of flat slab concrete construction, columns reinforced and shaped for shear and stiffness. Cinder block backing (or Siporex) and brick sheathing. Siporex party walls and 2" plaster lath partitions.





type G

Wherever feasible concrete has been left exposed, textured and painted.

The sculptured form of the apartment blocks as originally submitted are achieved by simply rotating every alternate floor level 90 degrees clockwise. The floor plan remains unchanged and would only involve the additional cost of waterproofing and terracing, and is mentioned as an alternative solution.

Materials

A restricted selection of complimentary earth tone brick colours (ochre, buff, rust, brown, sienna, etc.) and wood stained or painted sheathing would be used throughout to achieve visual continuity. Wherever possible brick walls are exposed in the interior of the dwellings.

Siting

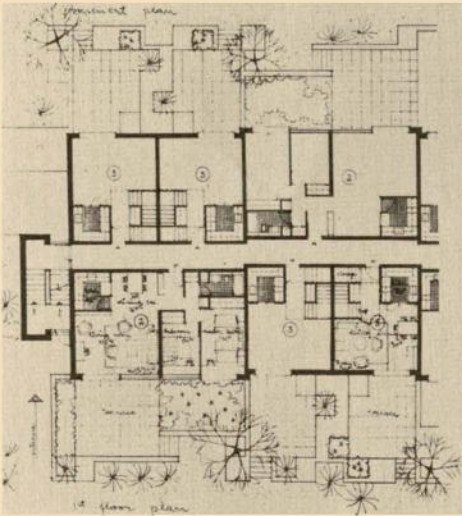
All units have been sited to achieve privacy and variety in outlook with respect to view, light, and use of indoor and outdoor space.

Apartment towers are placed on high ground and grouped in pairs to serve as central climaxes and focal points, and are related so that balconies do not face those on the twin tower, retaining maximum view and privacy.

Single family units have been designed and sited so that windowless side walls can be placed on the side yard line, if set back restrictions can be discarded.

Stage Growth

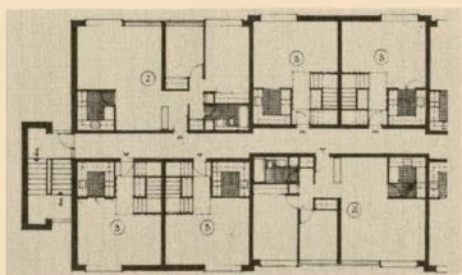
The physical development of the site can be progressively staged within each land enclosure grouping and by developing individual court clusters separately.



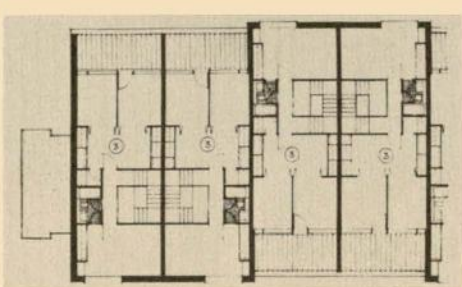
FIRST FLOOR PLAN



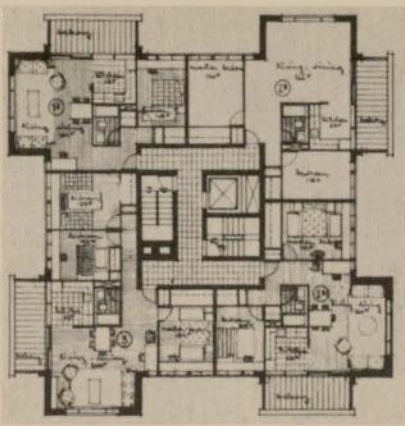
SECOND FLOOR PLAN



THIRD FLOOR PLAN



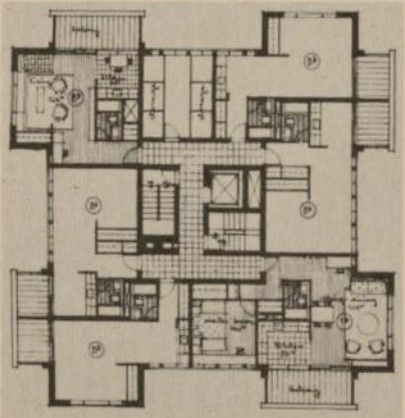
FOURTH FLOOR PLAN



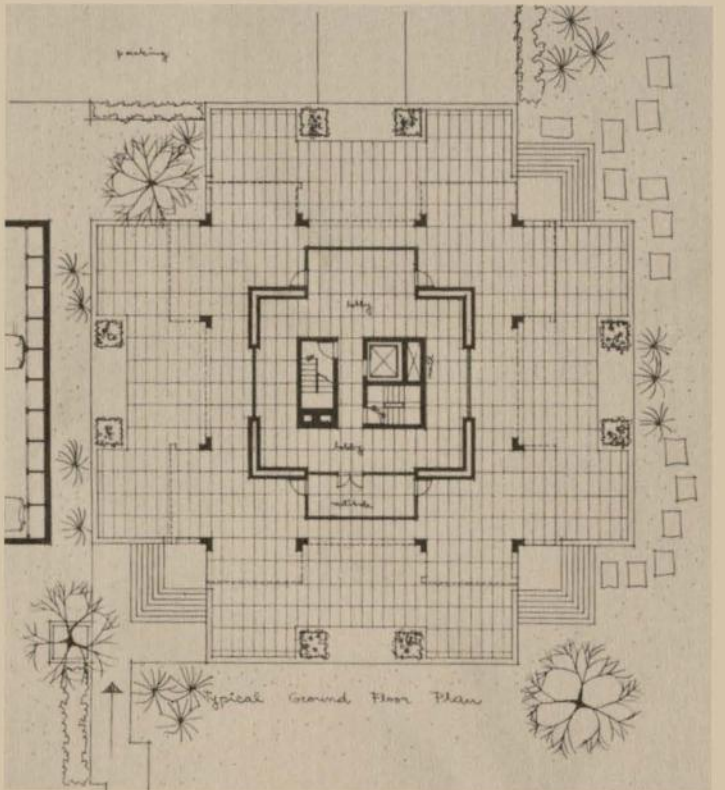
TYPICAL FLOOR PLAN 1-7 OF TYPE H ONLY



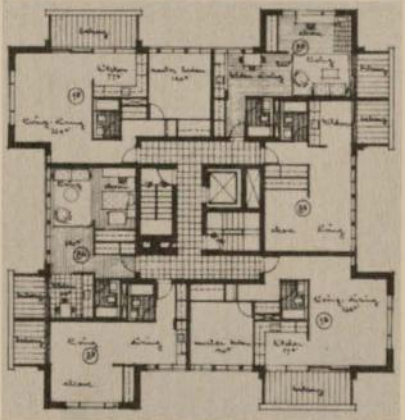
TYPICAL ELEVATION



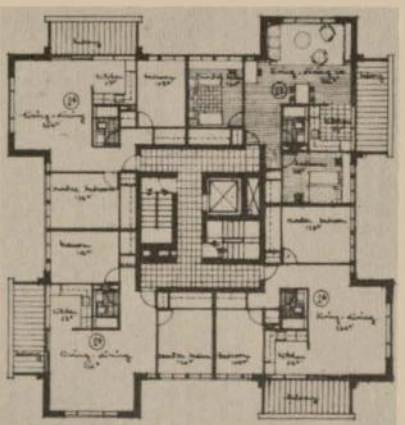
FLOOR PLANS 1 & 2



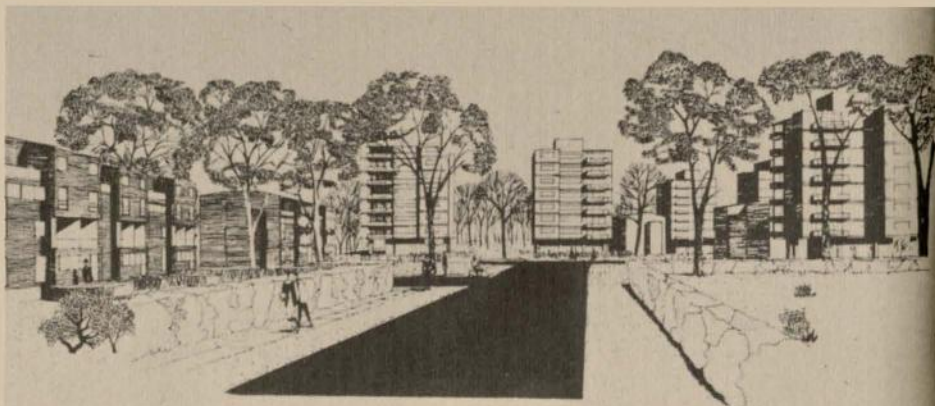
TYPICAL GROUND FLOOR PLAN



FLOOR PLANS 3, 4 & 5



FLOOR PLANS 6 & 7

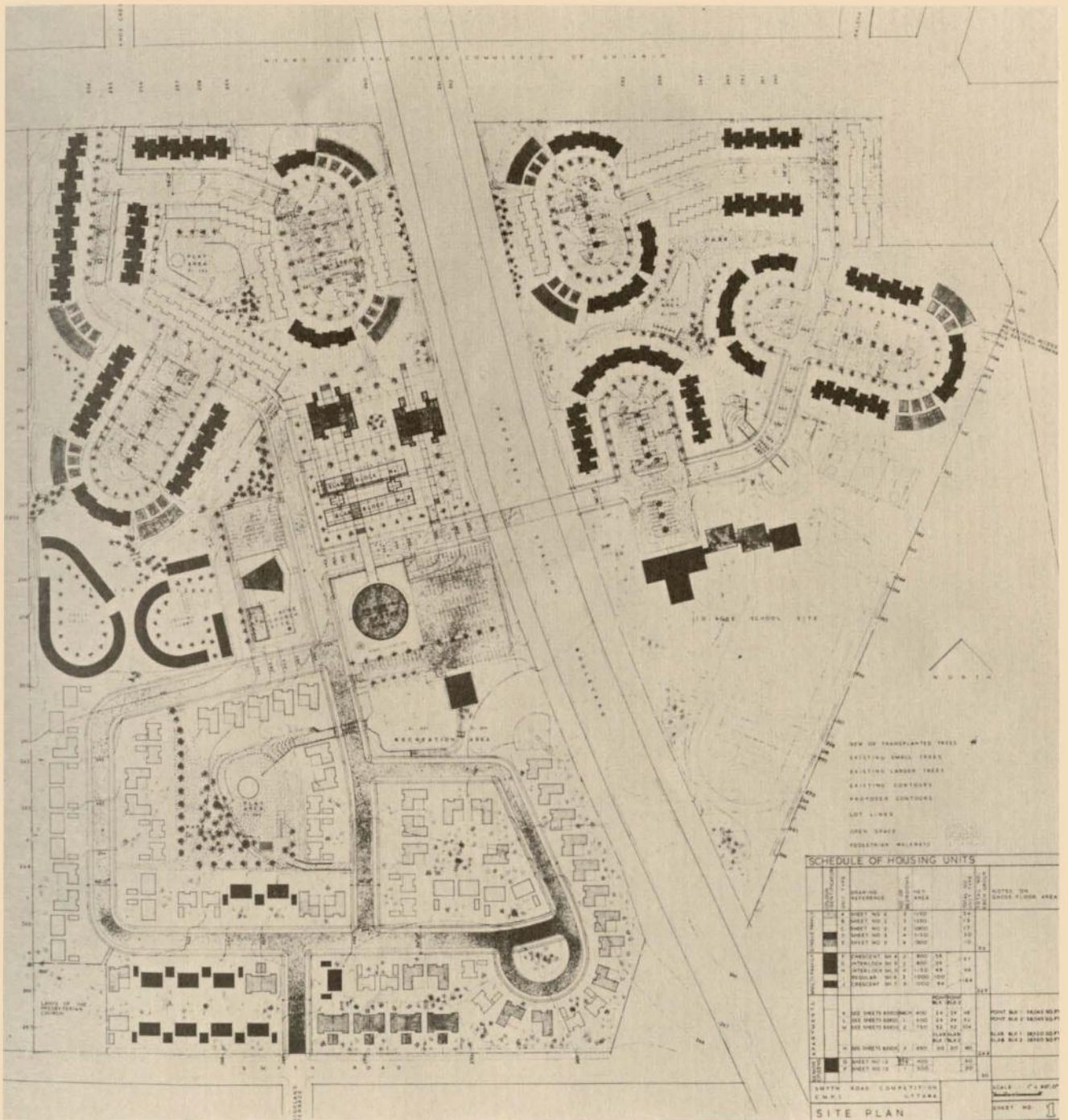


MULTIPLE HOUSING AND APARTMENT BUILDINGS

3rd Prize Winner

H. A. SWANSON graduated from the School of Architecture, University of Manitoba in 1951, and joined John B. Parkin Associates in Toronto, where he was a Project Architect for 5 years.

In 1956 Mr Swanson joined Toronto Industrial Leaseholds, an affiliate of Webb and Knapp (Canada) Ltd. as Consultant Architect, and in 1959 commenced in private practice in Toronto on his own account.



Concept

Open space was our basic consideration. Our problem was then to design open spaces around the buildings, both for pedestrians and automobiles and to give this space definition and crispness. We assumed each unit would contain its own automobile accommodation but provision should be made for visitor parking and the not unlikely second car in the family. Therefore the automobile is treated as a thing in its own special harbour or street so it cannot penetrate into the pedestrian world. These harbours become, in effect, social courts, affording the early "Sunday morning camaraderie" of men washing their cars outdoors in the sun in harmony with their neighbours. Thus, life will exist on both sides of the unit.

Road patterns as well as providing visual interest, are arranged to discourage through traffic. Road levels have been created to provide pedestrian underpasses at three locations on the site. A system of pedestrian walkways link open spaces and parks throughout the development. The requirement for 5% open space was broken down into three areas located to be conveniently accessible from any housing unit in the site. The parks have been located so that the new contours of the site create differences of levels within each park area, thus segregating children's play areas and the quieter sitting areas.

Siting

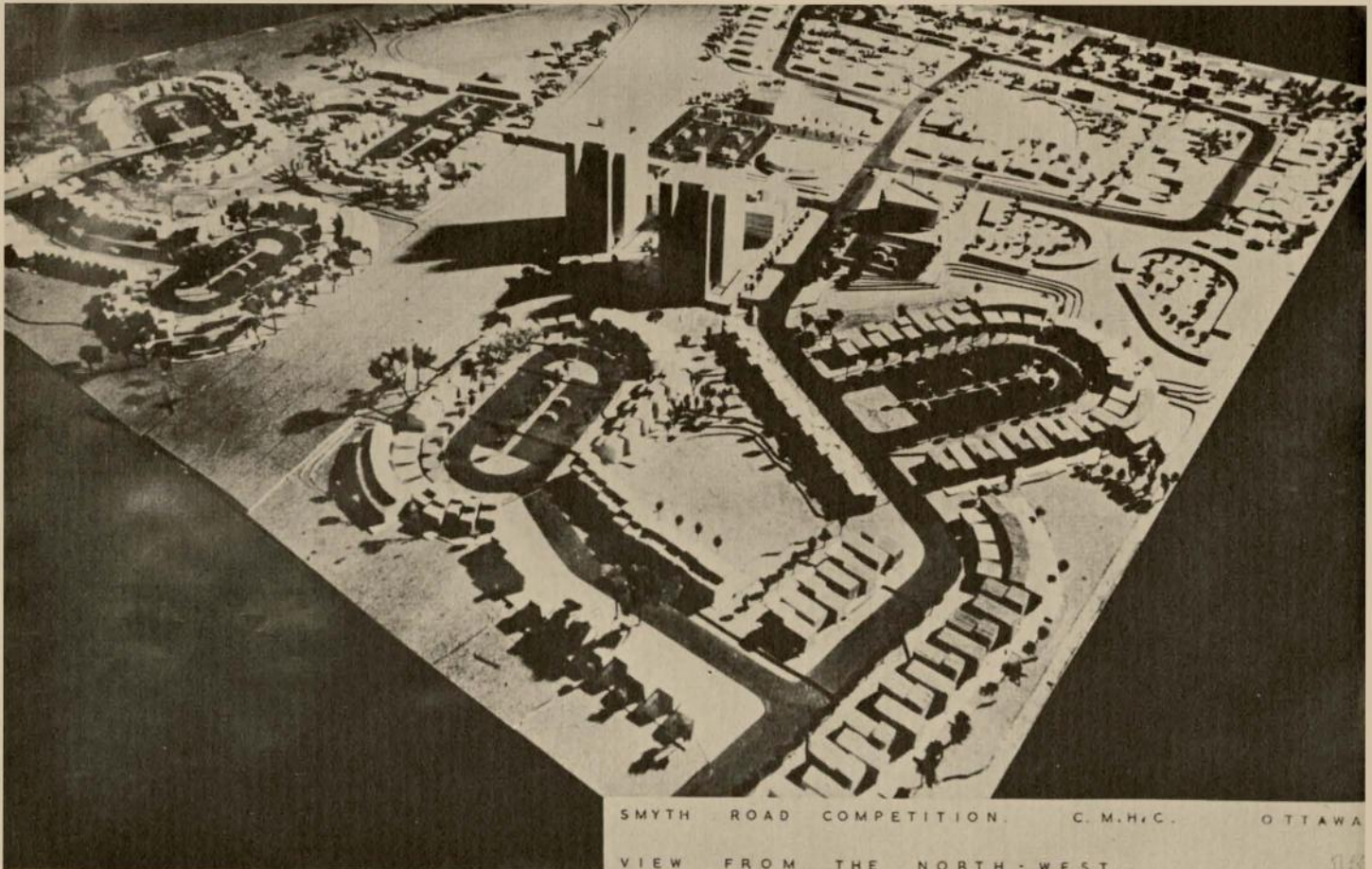
Grouping of the buildings in order to provide the

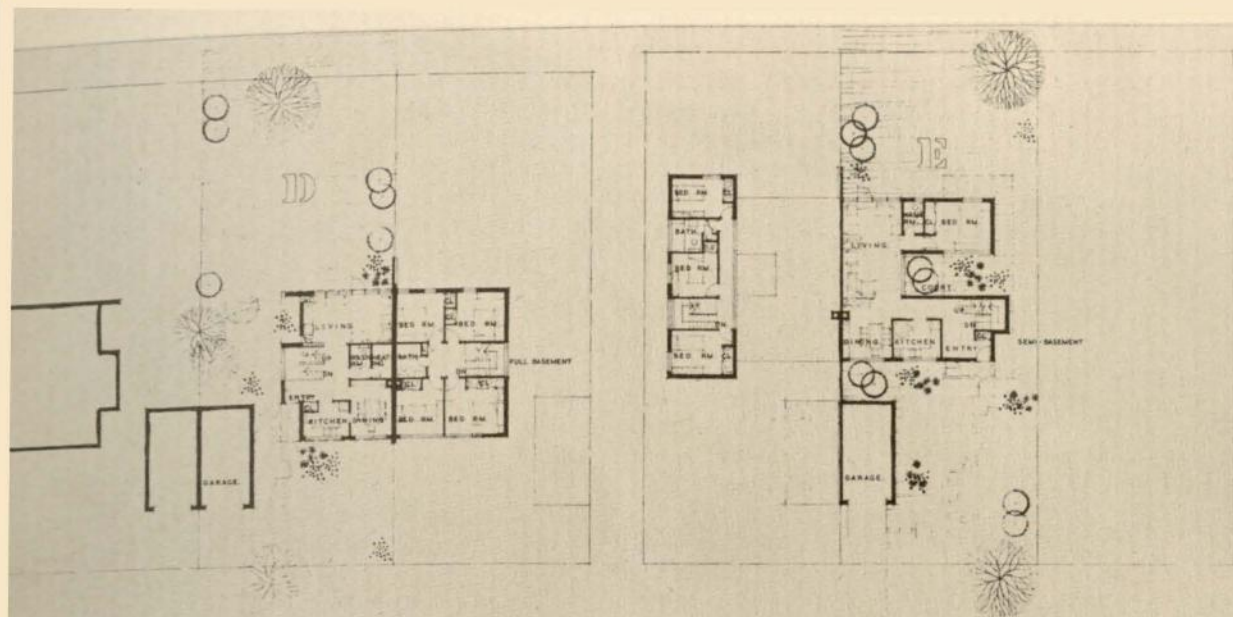
development with a civic character was considered an important aspect of the design. A neighbourhood center with the high rise blocks as a focal point, relates apartments, shopping center, recreation center, church and Senior Citizens groups, utilizing separate but inter-usable parking areas. This grouping locates the Senior Citizens in a quiet area, yet within walking distance of shopping, recreation, churches and hospital.

The school site was selected because of the convenience of access from adjoining areas served by the school as well as access from within the development.

Single family housing is so placed to complement the existing single family housing across Smyth Road. Roads are laid out to facilitate preservation of trees and natural grades.

Multiple family units have been located to provide visual interest with differences of roof levels and setbacks. Units are grouped around spaces allowing parking for visitors and the occasional second car without curbside parking. Siting of units was arranged to open living areas out to pedestrian walkways and parks on the side away from the vehicular traffic. Row housing units were considered more desirable than any multi-level housing unit because of advantages of private driveway, internal garage at grade, and private gardens opening off the living areas which all contribute towards a feeling as close as possible to that of home ownership.





PLAN GROUND FLOOR

PLAN SECOND FLOOR

PLAN SECOND FLOOR

PLAN GROUND FLOOR



ELEVATION TO THE STREET



TO THE STREET



ELEVATION TO THE PEDESTRIAN



TO THE PEDESTRIAN

SMYTH ROAD COMPETITION
OTTAWA
C.M.H.C.
SINGLE FAMILY UNITS
TYPE D & E
SCALE 1/8" = 1'-0"
SHEET NO.

STRUCTURAL SYSTEMS

Single Family Units

Foundation walls will be constructed of concrete block except at basement areas where foundation walls will be reinforced concrete.

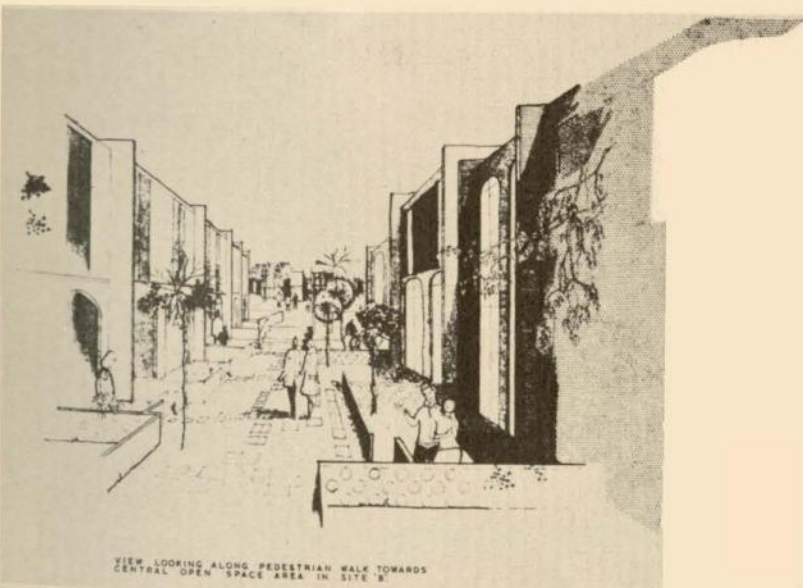
Unit A will have masonry bearing walls supporting a roof deck of precast concrete units. Floor construction over basement will be precast concrete units, all other floor areas will be mesh reinforced concrete slabs on grade.

Unit B structure will consist of wood decking on open web steel joists with masonry bearing walls. Floor construction will be concrete slab on open web steel joists over basement area and mesh reinforced concrete slabs on grade.

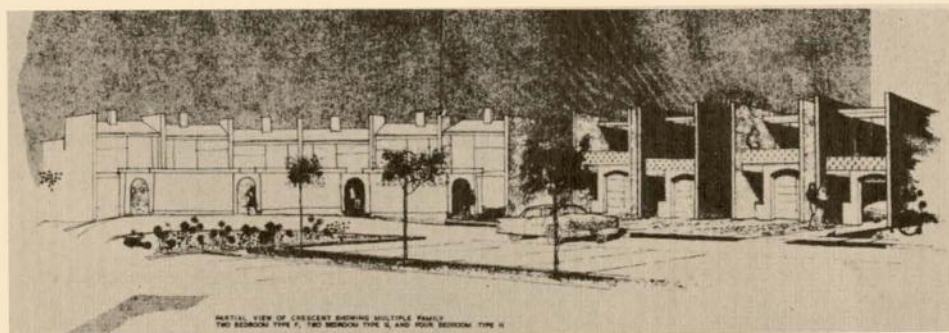
Unit C will have 2" roof deck on wood post and beam construction combined with masonry bearing walls. Floor construction will be concrete slab on open web steel joists.

Unit D will have wood sheathing and wood joists supported on masonry walls for floor and roof.

Unit E will be of wood post and beam construction combined with masonry bearing walls. Floor construction will be wood sheathing on wood joists.



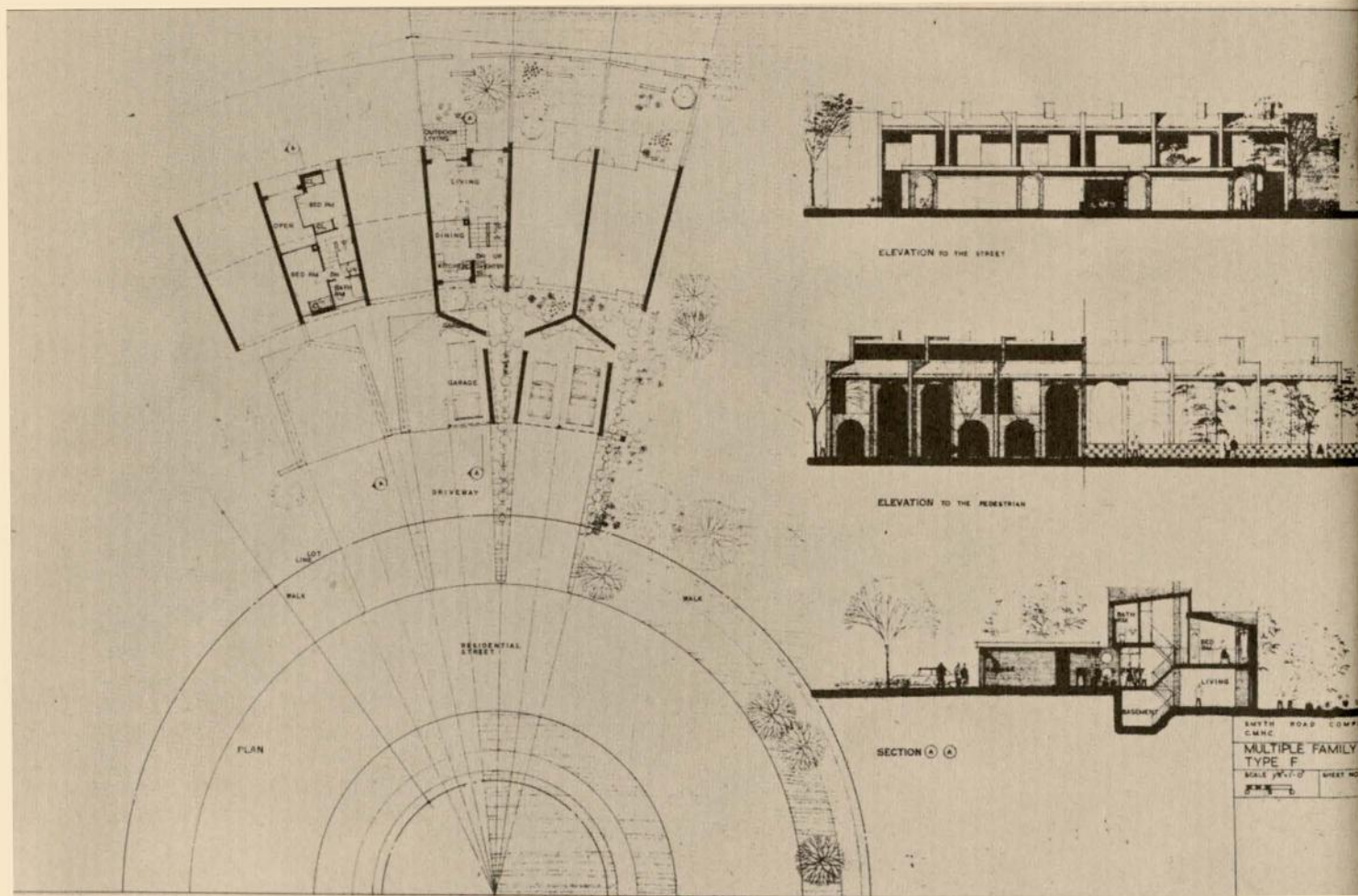
VIEW LOOKING ALONG PEDESTRIAN WALK TOWARDS CENTRAL OPEN SPACE AREA IN SITE 'B'

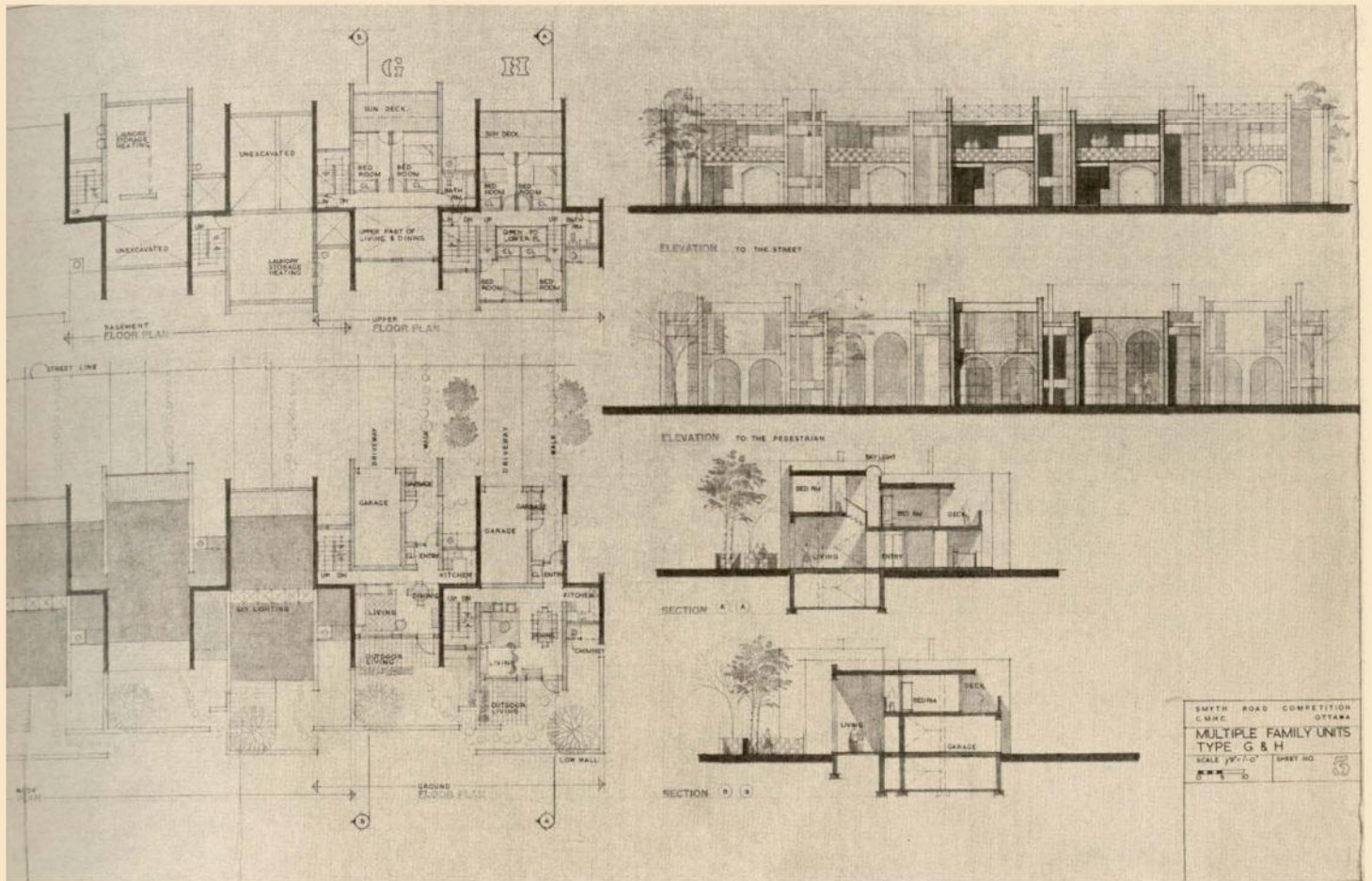


AERIAL VIEW OF CURVED SHOWING MULTIPLE FAMILY
THE BUILDING TYPE F, TWO BEDROOM TYPE S, AND FOUR BEDROOM TYPE H

Multiple Family Units

Foundation walls will be constructed of concrete block except at basement areas where foundation walls will be reinforced concrete. Roof construction will consist of 2" T & G wood deck on open web steel joists supported by masonry bearing walls. Floor construction will be 2½" concrete in metal pans on steel joists.





Apartment Units

Apartment units are constructed over a reinforced concrete garage structure.

All apartment ceilings, single family type D and some multiple family units will be plastered. All other units will have exposed structure either oiled, in the case of wood or painted in the case of concrete and steel deck.

MECHANICAL

All single family units, multiple family units and Senior Citizens units will have individual hot air systems either gas or oil fired. The point blocks and the Slab Blocks will have one common Boiler Room, with wall mounted low pressure steam convectors.

MISCELLANEOUS

Electric ranges and refrigerators are included in cost calculations for all rental units. All housing units will have asphalt drives to street.

A \$200.00 per unit allowance for landscaping has been included in addition to the sodding which will be carried from the front of each unit to the street curb.



GRAPHIC DESIGN IN ARCHITECTURAL RENDERINGS 11 $\frac{3}{4}$ " x 8 $\frac{1}{2}$ " 174 pages, Renouf Publishing Co. Ltd. \$15.00.

It is perhaps a little difficult to write about a book which contains 174 good size pages but only 207 words. These 207 are all contained in one compact paragraph which constitutes the preface and are quite adequate as an introduction to a most comprehensive graphic presentation of "human figures, animals, cars and trees".

Not all the pages will be of value to the architect or draughtsman, but the very wide range of subjects and styles will make this book a useful reference in any office engaged in creative presentation.

Originally the contents were compiled in West Germany and have since been distributed in 36 countries. It would be fair to say that each country will find subjects and styles familiar to its surroundings, and should an architect in Venezuela wish to illustrate a project in Egypt, he will at least be able to include from stock a representative camel.

If there is anything to criticize, it is that the majority of the sketches is a little "way out", and the more traditional or classical-minded will search long for the necessary accoutrements with which to dress their windows. However, by careful selection, this too can be achieved and will surely make this edition a worthwhile, if not valuable, addition to a reference library.

L. F. Webster

THE TOWNSHIP OF NIAGARA AREA PLAN — 1959

A STUDY OF THE UNIT OF GOVERNMENT FOR LINCOLN COUNTY — 1960. E. G. Faludi & Associates. Published by The County of Lincoln (*loan copies available upon request to Clerk and Treasurer, County of Lincoln*).

As these two documents of 153 and 84 pages respectively cover common parts of the Niagara Peninsula, it is convenient to review them together, and in some detail.

The Township of Niagara Area Plan deals with three major problems: the likely effects of the amalgamation of St Catharines and its adjacent municipalities on the Township area, the proposal for the annexation of part of Grantham by Niagara, and the problems of fruit-growing, vine-growing and dependent industries. Part III of the study covers a full survey of the characteristics of the area and Part IV relates the area to the region. Part VI contains proposals for a master plan and Parts VII and VIII cover financial implications and industrial assessment.

The aim is threefold: attempt to solve the present problems, develop the area's potential and produce a programme to coordinate all efforts in the planning and administrative fields "for the benefit of the area as a whole", raising such questions as how to protect the fruit growing areas against urban encroachments, how to contain the urban spread of the enlarged St Catharines, and how to direct and contain urban development in the township itself.

Amongst the many important issues brought to light perhaps the most provocative and difficult to resolve is the question of whether the existing dominant use of land — fruit growing — *should* be continued: whether present trends will progressively eliminate it and whether or not these trends *should* be resisted. The significance of these questions becomes apparent when it is realized that only 25% of the farms of Niagara Township are over 10 acres in extent and that many "farms" are in fact the second strings of families whose major source of income is industry or commerce. These are factors which suggest an accommodation or transitional situation of no great stability, particularly when one bears in mind the location of the Township in relation to

Seaway activity and the tremendous pressures toward urbanisation which seem likely to focus on the Toronto-Buffalo area because of its situation in the eastern half of North America.

The basic underlying problem is one of national planning: what is the likely *relative* value of the fruit-growing function of the Peninsula in the next two or three decades? In terms of the national economy is it a wasting asset considering the likely heavy fall in air freight costs in the next few years? Or will it become more valuable with population increase? If it is the case that the relative value of the fruit-growing to the economy is diminishing then planning for the area must be based on premises other than the preservation of a land use of diminishing national utility; and the question must be asked whether the area could be put to better use within the national economy.

Side-stepping this dilemma the Plan for Niagara allows for an increase of one million inhabitants, the safeguarding of over 26,000 acres of good fruit-growing soil, and recommends the establishment of a single planning area to cover Niagara Township and the east part of Grantham. This would be planned as an integral part of the larger planning area of Lincoln County. Major aims of the Master Plan are the concentration of urban growth in the present areas of Niagara Town, St David's, Queenston and Virgil, and the prohibition of further encroachment on the fruit lands.

The Lincoln County study is oriented toward the problem of government a step higher than the municipality, in this case at county level. The assignment has been motivated by the many applications for annexation in the area and by the contradictions originating in the existing outmoded political divisions and tax structure in an area of 332 square miles having one major urban centre only — St Catharines — located in the panhandle of the county.

The problems of the county in general are those of the Niagara Region: increasing urban population, inappropriateness of boundaries because of rural origin, imbalance of financial resources, piecemeal attempts at amelioration of these ills, the loss of agricultural output, rising importance in terms of communications (and their effects), and a growing tourist role. There are also the usual problems of services inefficiency associated with sporadic urban development.

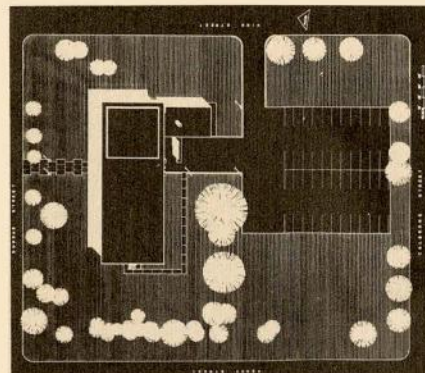
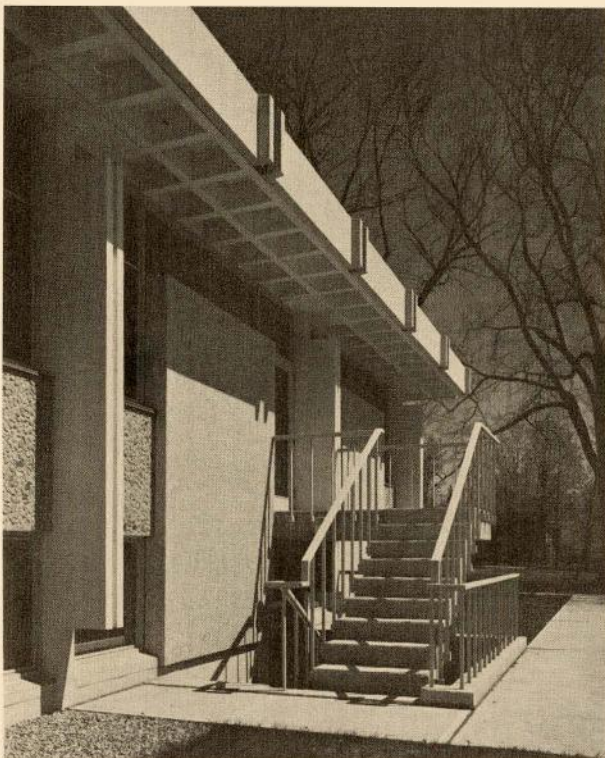
The report rejects the idea of metropolitan government for St Catharines and favours county government for the whole area on the grounds of the merging of rural, suburban and urban interests. This would mean the transfer of many present municipal functions to the county, and the possible readjustment of the county boundaries to coincide with a geographic region. The transferred functions would include control of assessment, the control of urban expansion and the direction of industry.

The report once again brings out the importance of planning at regional level, since Lincoln can only be developed intelligently in terms of the Niagara region as a whole (Wentworth, Brant, Lincoln, Haldimand and Welland). Taken together these two reports are a valuable contribution to planning in the Peninsula. They should also perform a useful service in bringing home to both those who are professionally concerned with these problems and to the public the urgent need to think in larger terms than the municipality and the vital importance of developing concepts and techniques that will be acceptable and capable of effective application over areas of common interest.

John Dakin



Town Hall Whitby, Ont.



ARCHITECTS
Rounthwaite & Fairfield
Toronto

STRUCTURAL ENGINEER
Robert Halsall

GENERAL CONTRACTOR
Mel-Ron Construction

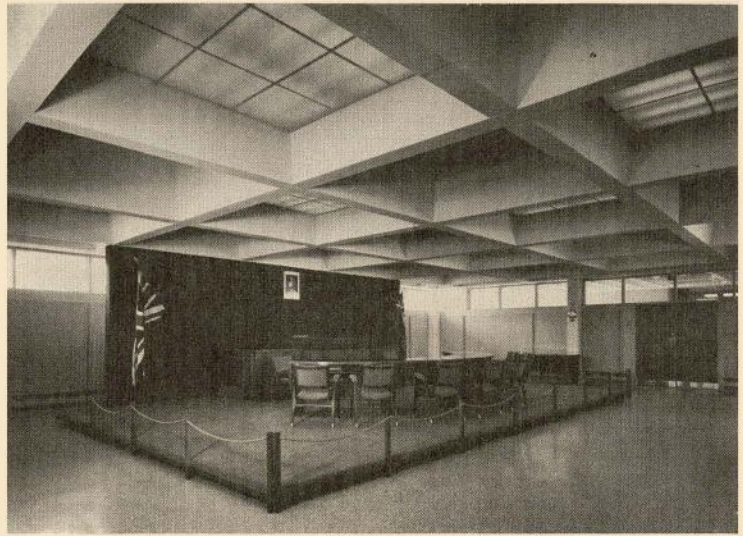
PHOTOGRAPHY BY NEIL NEWTON

THE Town Hall, Whitby, provides accommodation for all municipal departments, police and fire departments, and a council chamber.

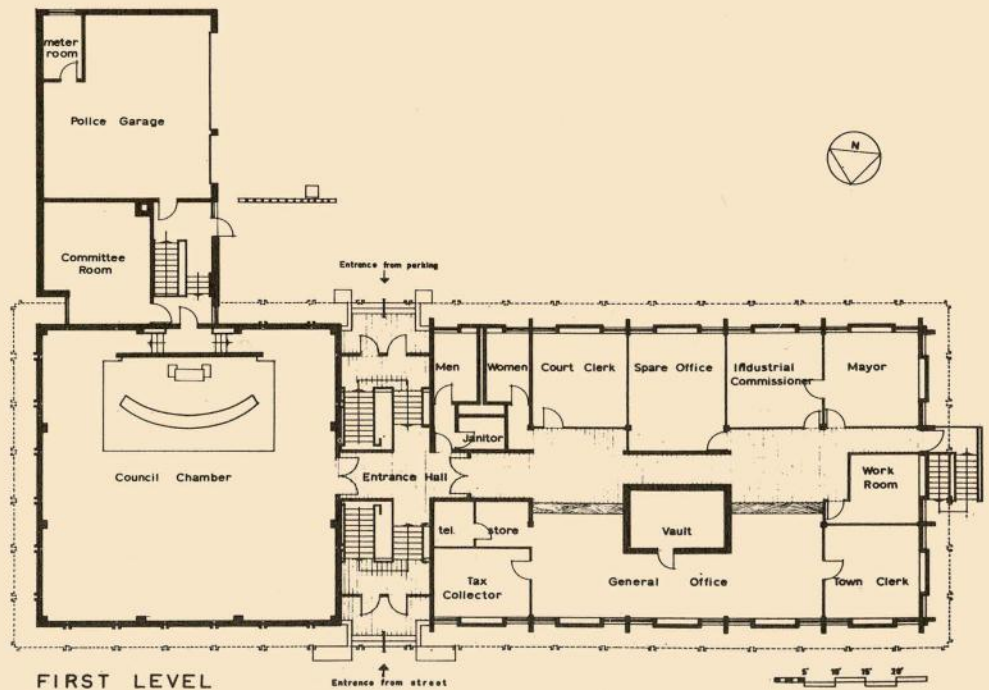
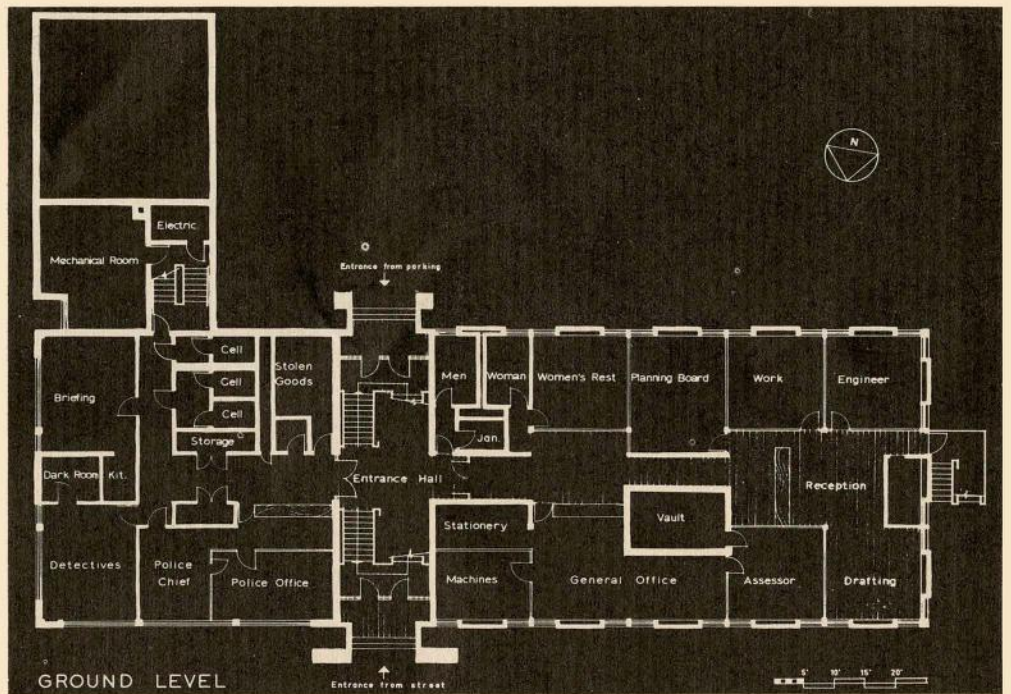
The project was subject to a budget restriction, calling for the design of simple, durable finishes throughout. Comprising 15,386 square feet of interior space, the final contract sum was \$256,861.20.

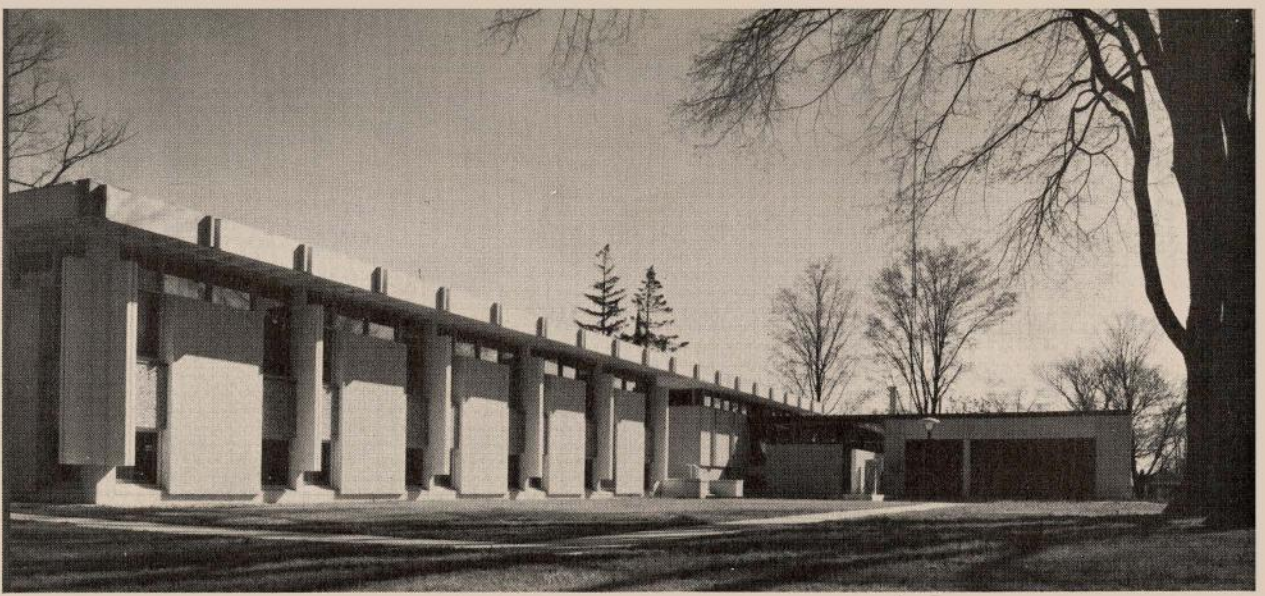
The building is of fire resistant construction and provides a high degree of flexibility in the arrangement of space to allow for expansion of departments and the possible future use of space occupied at present by the police.

On a 16' grid, the structural system consists of poured concrete foundation walls and reinforced concrete (8" x 8") columns, supporting in situ waffle-formed floor and roof slabs. All external walls are faced with granite and quartz faced pre-cast concrete panels, with 2"

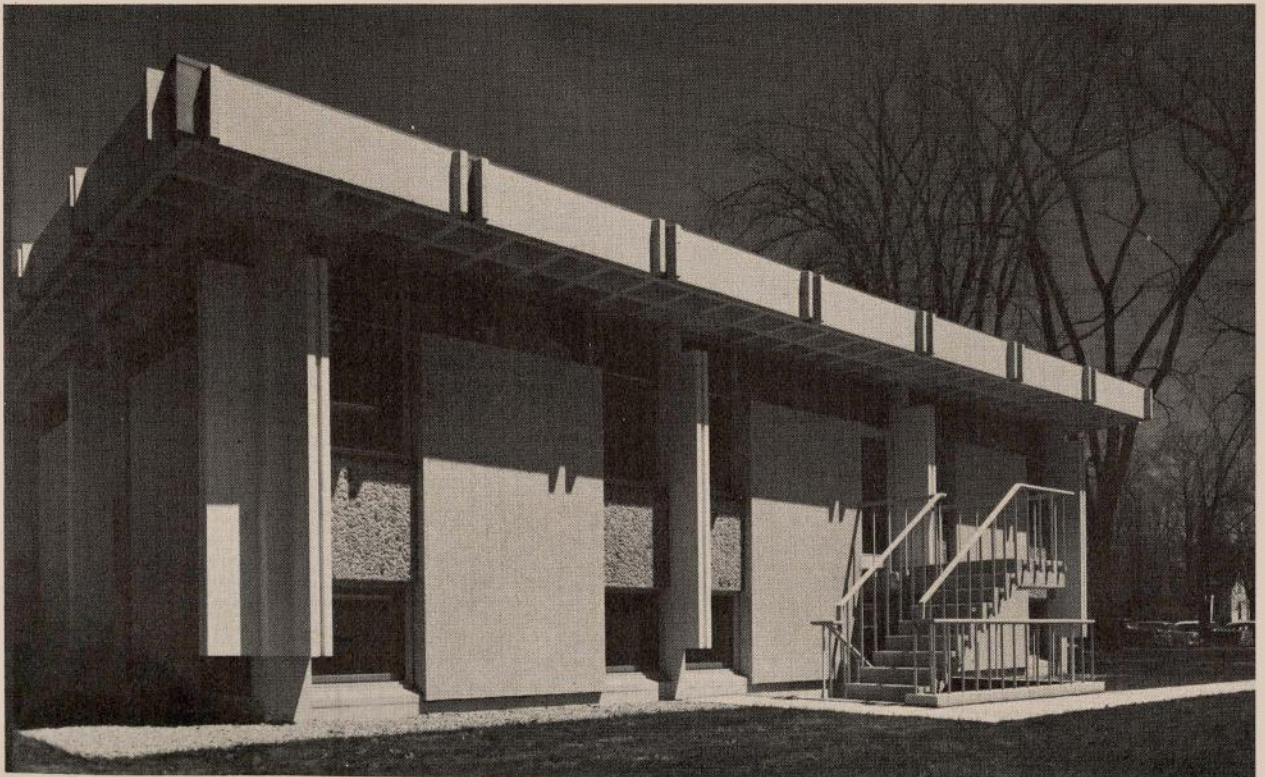
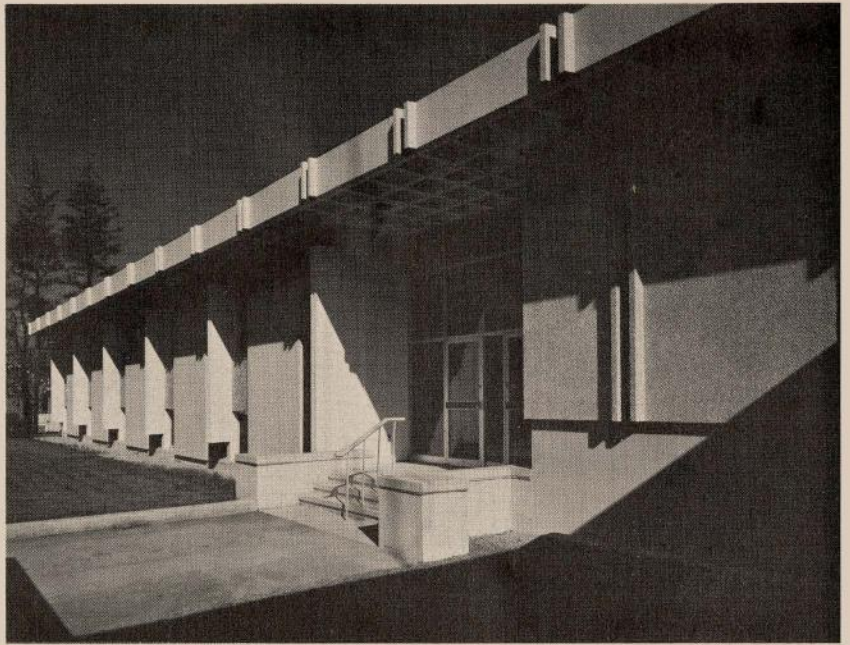


integral insulation and interior faces of smooth plain concrete. All fixed partitions are of lightweight aggregate modular concrete block, while moveable partitions are framed in timber and faced with cherry wood plywood. Plastic wall coatings have been sprayed on washroom walls; and Betonite formula on all other interior walls. Floor finishes on the ground floor are mainly vinyl asbestos tiling over machine-trowelled cement mortar topping laid on an iron and cement membrane. Floor finishes on the first floor are similar, but laid over 1" thick resilient topping. Terrazzo flooring occurs in washrooms and in the entrance and stair area. The ceilings are exposed waffle-formed concrete.





WHITBY TOWN HALL



CANADIAN

BUILDING DIGEST

DIVISION OF BUILDING RESEARCH • NATIONAL RESEARCH COUNCIL



CORROSION IN BUILDINGS

by P. J. Sereda

UDC 620.193:69

A variety of metals are used in buildings in many different ways. It is for this reason that the problems of corrosion in buildings cover a very wide range. In this brief article only an outline or classification of the main problems can be given, along with the basic principles, to guide the designer in his efforts to reduce the huge economic loss caused by corrosion. For specific information on the practical problems of corrosion the reader is directed to the extensive work of the various corrosion committees of the ASTM and of the British Iron and Steel Research Association. The National Association of Corrosion Engineers has published the results of much research in the field of corrosion.

Corrosion technology is now well established and is taking its place as another branch of engineering. Specialists are available to give advice on various methods that can be used to prevent corrosion. Their services can be of great value in the building field, especially if sought during the design stages. Revision of a specification at the planning stage may require only minor changes while changes made after a building has been completed are often very costly.

Corrosion refers to any process involving the deterioration or degradation of metal components. The best known case is that of the rusting of steel. Corrosion processes are usually electro-chemical in nature, having the essential features of a battery. Dissimilar metals in the presence of a conducting liquid, known as the electrolyte, develop an electrical potential that causes a current to flow whenever a suitable path is provided. Such electrical potentials

may also be developed between two areas of a component made of a single metal as a result of small differences in composition or structure or of differences in the conditions to which the metal surface is exposed. That part of a metal component which becomes the corroding area is called the "anode"; that which acts as the other plate of the battery is called the "cathode" and does not corrode, but is an essential part of the system.

In the corrosion systems commonly involved in buildings there may often be only a single metal involved, with water containing some salts in solution as the electrolyte. Corrosion may even take place with pure water, provided that oxygen is present. In such cases oxygen combines with the hydrogen generated at the cathode, removing it and permitting the reaction to go on. Other agents, notably certain bacteria in the soil which remove hydrogen, can also act as depolarizing agents and thus promote the corrosion reaction.

Steel, because of its low cost together with its many desirable properties, is the most common metal used in buildings. It can often be protected adequately by the application of suitable coatings. For certain purposes other metals more resistant to corrosion may be a better choice, depending on initial cost and expected service life.

Metal components used in buildings can be grouped for purposes of discussing corrosion into four general categories: 1) those used on the exterior as cladding, roofing and flashings, 2) those incorporated in the construction as structural and reinforcing steel, masonry ties

and damp courses, 3) those used in the services to a building as piping, storage tanks for hot water, drains and heating ducts, 4) those buried in the ground.

Corrosion of Metals used on the Exterior of Buildings

Metals in use on the exterior of buildings are subject primarily to atmospheric conditions but the effects of these may be modified by the particular elements of design. The principal atmospheric factors affecting the corrosion of metals are temperature, extent of pollution by sulphur dioxide and chlorides and the length of time during which metal remains wet by water. These factors can now be measured at different localities to provide a comparison of the corrosion to be expected at different sites. A more direct method has been used by exposing samples of different metals at different sites and determining the rate of corrosion from the weight loss after cleaning. Such testing has shown that the corrosiveness of different sites varies greatly and that the variation is different for each metal tested. The outdoor exposure of architectural metals at eight sites in Canada has been carried out under the direction of the Associate Committee on Corrosion Research and Prevention. Progress reports giving the results for 2 and 5 years' exposure are being published by the National Research Council. Similarly in the United States the American Society for Testing and Materials has for many years sponsored outdoor exposure studies and much information is available for ten U.S. sites.

Such values as these can be used only as a guide for assessing the corrosivity of metals when they are exposed on a building as flashing, roofing or cladding, because design features can greatly modify the conditions of local exposure. For example, the overhang on a roof can shield cladding on a wall from much wetting by rain and dew. Such design features should be considered where possible because they can save the metal from normal corrosion. In the design of roofs, gutters and spouts, any traps and recesses where water will collect and remain for long periods should be avoided because corrosion will proceed as long as the metal is wet. Such features of design are particularly significant in bridges, towers and other exposed structures made of metal; channels may be welded in such a way as to form

troughs where water may collect and cause serious corrosion by exposing such a member to periods of wetness much in excess of the normal wet periods imposed by rain or dew. **It can be stated that faulty design is the first major factor leading to the corrosion of iron and steel in buildings.**

Air pollution by sulphur dioxide derived from the burning of coal is a serious factor in corrosion. A chimney located on top of a building can release high concentrations of sulphur dioxide and expose roofing and flashing on that or adjoining buildings to very severe corroding conditions. One of the ACCRP sites is located on the Federal Building in Halifax where such conditions exist. There sulphur dioxide pollution is about 20 times as high as the average for the city, and the corrosion is proportionately higher than elsewhere. Different metals are affected in different ways by changes in the environmental factors.

Recently it has been shown that temperature is an important factor in the corrosion of steel in the atmosphere. For this reason steel used in the North where the average temperature is lower does not need as much protection from corrosion. Such localities also have lower sulphur dioxide pollution and perhaps a lower wetness period, which would help to explain why steel corrosion rates were found to be 33 times greater in Ottawa than in Norman Wells.

Corrosion of Metals Within Building Constructions

Structural steel usually accounts for the major portion of the metal used in buildings. Fortunately it is often located within the construction and is shielded from the outdoor environment by cladding and roofing and from the indoor environment by the interior finish. In cases where structural steel is exposed to water, either from rain penetration or from condensation of water vapour, corrosion does occur and may endanger the structure itself. Only good design and proper use of materials can avoid this condition. Proper venting of corrosive fumes from factories can assist greatly in preventing corrosion of structural steel in such buildings.

Corrosion of Steel in Concrete and Masonry

Reinforcing steel and prestressing steel may account for a large portion of the metal used

in buildings. The conditions inside bulk concrete and mortar are favourable to steel, and many old concrete structures testify to the satisfactory performance of these materials. There are, however, examples of failures of various metal components encased in concrete and mortar. Usually these can be traced to poor quality concrete and masonry as well as to poor design, where the thickness of cover over the steel or faulty joints resulting in cracks have permitted water to penetrate easily. Poor quality concrete, such as results when high water:cement ratio is used, will have a high permeability to water; and if the water contains salts, as in salt spray from the ocean, the reinforcing steel is almost certain to suffer corrosion attack. In all these cases there is no substitute for an adequate cover of good quality concrete.

Evidence of corrosion of steel in concrete has been associated with the use of calcium chloride as an additive when placing concrete in cold weather. Cases of severe corrosion of steel radiant heating coils have been observed where calcium chloride was used. Serious buckling of a vault door frame was observed where grouting around the door contained calcium chloride; corrosion of the frame at the concrete face caused it to buckle inward, thus preventing closure of the vault door. There can no longer be doubt that addition of calcium chloride to concrete can accelerate corrosion of the metal parts embedded in it.

The problem of corrosion of steel embedded in concrete is receiving a great deal of attention at present because of the advent of prestressed concrete, in which even small amounts of corrosion are likely to be serious. Similarly, the effect of calcium chloride on other metals should be considered. Early failure of aluminum conduit embedded in concrete containing calcium chloride has also been observed.

Corrosion of metal ties in masonry is dependent upon the penetration of water into the masonry. If rain does not penetrate then corrosion will be negligible. Metal ties taken from a building in Halifax after 75 years' service showed only moderate corrosion and were still serving their purpose adequately. Certain metals such as aluminum, when used as flashing embedded in mortar, should be protected by a suitable bituminous coating.

A variety of metals are used in providing the necessary services to a building. Those in which corrosion is most likely to be a problem include the heating, water supply and sewage disposal systems.

The heating system can present corrosion problems where steam or hot water is used. A boiler will corrode and scale if the water is not properly treated, and although the technology for such treatment is well established, in practice it is often ignored, sometimes with disastrous results. Corrosion of condensate return lines may also often present a serious problem that is usually associated with the presence of oxygen or carbon dioxide.

Where hot water is used in conjunction with radiant heating panels corrosion can be a problem, as already mentioned, due to corrosion of the coil from the outside. In this and in the normal hot water heating system corrosion on the inside of piping can be a problem also. It is a wise precaution to avoid the use of different metals in a system in order to eliminate galvanic corrosion at points of contact of dissimilar metals as well as to prevent the deposition of ions of one metal upon another, as in the case of copper and zinc. A variety of corrosion inhibitors such as phosphates or silicates can be used to minimize corrosion on the water side. There is a danger, however, that partial treatment can be worse than no treatment in the case of some inhibitors, and to be effective regular attention is required with all.

Systems supplying fresh water, especially when hot, present many serious corrosion problems. The primary factor is the water which contains dissolved oxygen and dissolved salts. Each municipality has a water supply that is unique from the standpoint of its composition and specific corrosiveness. Because no part of the fresh water supply is recirculated, the supply of oxygen is not depleted as in a hot water heating system, nor is it as convenient or economical to add chemical inhibitors to mitigate corrosion. Where the water supply is classed as hard the water may be softened but this often results in increasing the corrosiveness of the water because some of the scale-forming constituents are removed. Scale usually reduces corrosion since it may act as a protective coating.

Temperature is an important factor in corrosion by fresh water. Thus storage tanks for hot water are subject to the most severe corrosion. Those most commonly affected are the galvanized steel tanks, which are economical and under favourable conditions of service with certain types of water do give satisfactory performance. However, in many localities the corrosion of galvanized steel tanks is a serious problem and much study has been directed toward finding a solution. Hot water tanks should be operated at as low a temperature as is feasible (no more than 150°F) because it has been found that service life can be extended threefold in some localities when the temperature is decreased from 170 to 150°F. Copper piping should be kept out of a galvanized tank and for a distance of several feet adjacent to it. The use of large-capacity external (side arm) heaters, which are turned off when not required, have been found to produce less corrosion than small, thermostatically controlled immersion heaters. In any specific case of corrosion the problem can only be resolved by considering the combined effect of the two basic factors: characteristics of the water, and the design and resultant conditions of operation of the system.

The use of corrosion-resistant materials such as copper does not always guarantee that the system will be free from corrosion. There are instances where water containing dissolved carbon dioxide, under certain conditions of service, have caused severe corrosion of copper tubing. Soft waters which are slightly acidic (low pH) can also attack copper. **This further emphasizes the fact that every material will perform well only when the conditions for its service are favourable and that these con-**

ditions are specific and different for each material. This is one reason why the mixing of different materials in one system can lead to trouble because of the introduction of a possible weak "link" in addition to the problem of the interaction of dissimilar materials which may cause galvanic corrosion.

Metals Buried in the Ground

Some metal components of a building may be buried in the soil, as are piles and service piping for water and sewage. From the standpoint of metallic corrosion soil conditions vary a great deal because of the variety of soils that can be encountered. Particularly severe corrosion problems can sometimes arise as a result of the presence of certain soil bacteria. These are usually found in clay soils or muds at the bottoms of certain rivers and lakes. Engineers should be constantly on the lookout for such conditions because damage by corrosion to buried metals may not be detected until it is too late to apply remedial action, and replacement of the components may be expensive if not impossible. Cathodic protection by means of an imposed electric current, combined with the use of asphalt coatings, is usually the best method of protecting metals buried in the ground when potentially corrosive conditions exist. Care should be taken to avoid the use of materials for backfilling which may contain corrosive chemicals.

Designers of buildings can, by keeping in mind the principles involved in metallic corrosion, do much to ensure that metals will always be used under favourable conditions. Large savings to building owners and to the country as a whole are possible through improved design and selection.

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1961 RIBA Royal Gold Medal

presented to
Mr Lewis Mumford

*The address of the distinguished American
writer and critic to the
Royal Institute of British Architects*

THE HONOR YOU HAVE ACCORDED ME ranks as the highest that can be given to an architect whose work has justly earned worldwide acclaim. And when you give it to a writer, for his essays and books alone, the recipient himself has the giddy sense of being rocketed upward from the solid foundations of architecture and becoming, by this very release from your usual canons of judgment, an all-too-lonely creature — almost a man in space — exalted perhaps by his mission, but not at all sure that he should have been picked out for such a defiant venture.

The fact that this is the first time such a special honor has been bestowed upon a writer only makes the award that much more royally magnificent, and, by the same token, that much more embarrassing. Yet it is with no sense of false humility, and I trust no untoward lack of respect for your past judgments and selections, that I now tell you I should feel easier if you would permit me to share this award with four other writers on buildings, monuments, and cities, who were somehow passed over by their immediate colleagues and contemporaries, if never wholly forgotten by the rest of the world. Let me share it, I beg you, with my great British predecessors and masters: John Ruskin, William Morris, William Richard Lethaby, and Patrick Geddes — the men whose thought and vision made my own work in this field possible. Supported by their colossal shades, magnified as these figures now are by the judgment of time, I should feel less lonely; and would be free to savor, with uninhibited gratitude, my still generous fifth portion of the honor you have bestowed on me, and through me, on us all.

Do not fancy that my own spontaneous reaction to this evidence of your approval is any less vivid at sixty-five than it would have been at twenty-five. Every fibre in me is ready to yield to the moment and to bask in its sudden glory, as when at the end of an arduous swim,



Left: Mr Lewis Mumford Right: Sir William Holford, PRIBA

after breasting counter-currents and being thrown about by the cold breakers, one reaches a friendly beach and sinks gratefully into the sunwarmed sand. All this I feel today, and am thankful I have lived to experience it. But I would be untrue to the work you have honored, if I did not confess to you that my personal happiness, today and every day, is undermined by the well-founded anxieties and the rational forebodings I share with all other reasonably alert men and women in my generation. We have not lived through half a century of violence, irrational destructiveness, and collective extermination without knowing that, if the nations continue on their present course, still more infamous calamities may at any moment envelop the whole planet. These memories, and still more these anticipations, corrode our natural delights even as they insidiously sap our creative energies.

For who can go about his work from day to day, calmly and confidently, whilst decisions about the ultimate fate of mankind are being made in privacy and secrecy by fallible, indeed demonstrably error-prone, leaders, insulated against public examination, public criticism, public control? Who can trust decisions made by men who have patently become the passive instruments of the unruly mechanisms and the lethal energies that science has placed in their hands? Were we living in ordinary times, I would not mar the present hour by even a passing reference to either the world's danger or my personal concerns. But for both good and evil these are not ordinary times since nuclear energy gives a cosmic dimension to all man's errors, sins, and psychoses. Yet even this brief allusion to the state of the world must seem, I realise, to many here in this audience, a wanton intrusion — unseemly, extravagant, and at best, considering the occasion, a palpable breach of taste. I must risk that natural criticism, even if my conscience impels me to defy it. What I feel called upon to remind you now is that no part of our daily life, no family expectations, no professional plans, no long-term hopes and creative prospects for our country or for the world at large, has any likelihood of coming to its natural fruition unless we master the forces that now so grievously threaten us. The ultimate madness of our age would be to assume that all its current exhibitions of madness are entirely normal and inevitable.

Forgive this affront to a convention I am usually happy to respect. I commit it only because our habitual daily

behavior seems to me as inappropriate to the situation we confront as would be the conduct of the passengers and the crew on a disabled ship, who should continue to polish the brightwork, caulk the lifeboats, play shuffleboard and bridge, and place bets on the dummy horses in the usual shipboard manner — though they would instantly know, if they dared lift their eyes, that a black tornado was fuming across their path, and that the captains of all the national vessels, disregarding the storm warnings, are blindly steering, by out-of-date charts and wild compasses, for a non-existent destination. My figure is, I hasten to add, a faulty one: for the approaching storm, far from being an unavoidable natural event, has actually been conjured up by the captains and ship-owners themselves, using their now gigantic — and even godlike — powers for pathetically stunted human purposes. The moral, for all that, remains the same. At such a perilous juncture as this only one act is rational, only one command possible: All hands save ship!

The world is still waiting for leaders alert enough to utter that command and take hold while the ships can still be salvaged and brought to port. Such leaders would be wise enough to know that they cannot hope to solve unilaterally, in the interests of their own country, their own hemisphere, their own race or ideology or religion, problems that transcend, in their immensity and their gravity, all such parochial boundaries, and such childish-ly irrelevant interests. They would put aside the brazen trumpet of power and speak in a low human voice, without foolish pride, foolish boasts, or foolish fear, in a mood of disarming self-criticism and repentance, with many pauses to listen patiently to all those they were addressing; they would bring to the occasion those qualities of imaginative understanding, humor, and love that are necessary to awaken similar responses in other men. Even one such leader, arising at the right moment, might precipitate the needed change, as a single crystal in a super-saturate solution induces a general crystalization.

PLAINLY, we cannot predict when such a moment may occur and such a leader may appear, and we cannot, by a mere act of will, evoke such an occasion: still less can we train and tailor such a leader in advance, as our space oriented experts select candidates capable of heroically enduring the ordeal of their vacuous voyages. But each of us, individually, can sensitize himself and fortify himself for the occasion; each of us can reconsider the irrationalities and automatisms he has learned to submit to in his own field, and each of us can assist in bringing about, within his own province, be it science or education or architecture, the kind of transformation that will restore human control, and reinstate human goals, in every part of the process. Unless we so ready ourselves, unless we so reconstitute our minds, our purposes, our daily activities, there is little chance that we shall be capable of responding effectively to the singular moment when it comes, and when, by a superhuman effort, we may reverse the destructive tendencies that are now almost everywhere at work.

Admittedly, I am canvassing the possibility of a miracle. For if the world is finally to be saved from the nuclear holocaust that the great powers have been so assiduously preparing for each other, it will only be through such a general miracle of regeneration as you in

Britain experienced after Dunkirk. And as you have special reason to know, even when the leader appears and the life-saving processes have been set in motion, such miracles still require painful efforts and severe sacrifices; and what is more, they demand even greater displays of dogged patience in the face of colossal difficulties than more ordinary human events demand.

We shall not, alas! effectually undo the errors of the last twenty years in a day, nor even yet perhaps in a century. But for the next few minutes, I am going to make the bold assumption that this miracle will actually take place; for, if I may repeat a remark I made toward the end of *The City in History*, the only safe generalisation about life is that it is full of surprises. Happily, as Gilbert Chesterton put it, in my favourite fantasy of his, *The Napoleon of Notting Hill*, mankind remains quietly addicted to its old games of Cheat the Prophet. Like any competent diagnostician I always wince a little when people bestow the title of prophet on me, usually in an unkind effort to give me a quaint, outmoded, Old Testament look; but I shrink even more from being called a Jeremiah — he whose prophecies so fatally came true. If I were a prophet, I should want to be a false one, and I would be thankful rather than chagrined if mankind would only be good enough to cheat me.

But the miracle I am tentatively counting on now is not, I regret to say, quite so unconditionally bright as it may seem. Even granting our biological survival for at least another century, the very factors that have made it so hard to keep nuclear energy, along with many other genuine triumphs of science, from being turned against mankind will — unless we radically change our mind and alter our course — inexorably continue to work. Conceivably our governments may hurtle from crisis to crisis without actually committing national suicide or physically mutilating the human race. Yet if we go on operating automatically in every other field on the same premises, pursuing exclusively our present goals of ceaseless technological expansion, with no reference to other human ends, the final results in another hundred years may not be singularly different from that which would be produced by a single gigantic catastrophe. For in magnifying the functions of machines we have increasingly belittled the purposes of men; and as our scientific artifacts become more exquisitely refined, what is left of the human soul, the all-powerful but unbalanced intelligence, tends to dispossess and effectually dehumanize the rest of life. Already one of our American space scientists has, in a classic phrase, defined the new status of man: for him a human being is simply the cheapest mass-produced servo-mechanism as yet available for operating an otherwise completely automatic machine. Samuel Butler's wry jest, now a century old, that man might soon be reduced to serving as a machine's agent for giving birth to another machine, daily comes closer to our working realities.

I RAISE this problem on the present occasion for a special reason: it greatly concerns the arts of architecture and town planning and regional design, and the answers we make here will either help or mar our efforts to cope with all the insensate and so far misdirected energies of our age. We cannot hope that the automatic machine, harnessed to equally automatic organizations, left to themselves will deliver us from the disabilities of automatism, or that an expanding economy will provide ade-

quate reparation and reward for a constantly contracting mode of life. There is no hope of finding a purely political solution for the problem of restoring the organic balance and human control, and so enabling the diverse communities and cultures of the world to live in comity, unless we have the wits to move firmly in the same direction in every other field.

A CENTURY ago it was natural for progressive minds to think that technics and science alone were the appointed repositories of all the rational forces in society; at that juncture even those who were at opposite political poles, like Herbert Spencer and Karl Marx, were agreed. In architecture, the Great Exhibition of 1851, housed in that technological marvel, the Crystal Palace, was an admirable expression of this faith and hope. Many modern architects still cling to this original Victorian ideology: they conceive that the chief duty of man in the present age is further to hasten his mechanical conquests, and to bring ever wider realms of existence under purely external mechanical control. One such European architect has even expressed his utter contempt for the organic by planting lumps of colored glass instead of living plants in a garden — thus going beyond the example of certain New York architects whose washable plastic foliage and flowers still imitate nature. But would not an unbroken concrete surface, with not even a crack where some stray seed might lodge, be even more expressive in a modern garden?

To disregard the nature of the organic, the human, the personal, to disparage the autonomous, the spontaneous, the creative and the formative, to ignore the self-directing and the self-developing tendencies of all organisms: to admit only those parts of life that can be subject to extraneous command or completely replaced by a mechanical equivalent, as air-conditioning apparatus now often takes the place of fresh air, even in country houses where the air still is fresh and full of sweet odors — all this embodies the vulgar notion of the value of science and the mission of modern architecture and modern man.

This Victorian attitude was once clearly justified by the need to break through decayed ideologies and moribund traditions, in order to clear the ground for receiving those fresh manifestations of life that science and technics once embodied. But today this bias is absurdly musty and old-fashioned: for it takes no account of disastrous results of following this new creed to its conclusion, and has not yet accepted the radically different premises now needed to control the pathologically compulsive dynamism of our age. Our culture today is not restricted in its growth by undue respect for old ways, fixed traditions, dead historic forms. Just the contrary, our capacities for orderly human development are menaced by meaningless change, by random quantitative expansion without qualitative assimilation, by a serious lack of organic continuity, by our addiction to a moment-to-moment continuum that neither remembers the past, selects from the present, nor anticipates the future; in short, by submission to purely mechanical demands that bring no sufficient human fulfilment. As a result of our one-sided commitment to the machine, we have become the victims of a purposeless materialism whose only goal is to keep on going. Ours has become the civilization of the disposable container; and our buildings tend more and more to embody its peculiar characteristics.

Every year the external shell of our existence becomes more complex, more mechanically refined, more monumental in scale, and often, in an abstract architectural sense, more elegant: but the human content becomes more empty, and the human purpose more incidental. This condition has been perfectly mirrored in those sterile bureaucratic images of the City of the Future that have prophetically dominated architecture for the last half century. By practical necessity, if not by avowed demand, the inhabitants of the great high-rise structures that are now marching across the landscape must be trimmed and altered to fit the architectural design. Le Corbusier openly proclaimed the necessity for altering human dispositions to fit his architectural idiosyncracies in his defence of the absurd constrictions imposed by Unity House in Marseille; and Mies van der Rohe makes such peremptory demands without even bothering to defend them. So far from the architectural forms being fashioned to serve and delight the user, the house-dweller is selected, as an astronaut is selected for a space capsule, so as to conform closely both physically and psychologically, to the formalistic conditions and the financial calculations: the sole factors that, by seemingly pre-ordained and providential harmony, govern the whole design.

THIS cold indifference to vital human requirements is sometimes disguised as a new kind of humanism. I call to mind a brand-new dormitory in an American university, whose program had been very imaginatively conceived and carefully worked out in a cooperation between the students and the architectural faculty. The architects went out of their way to flout every personal and social requirement for rest, for study, for small-scale sociability, in order to create a hideously prisonlike structure, with rooms like punishment cells and ostentatiously wasteful public spaces. This design is little more than the mirror-image of the brutalized rationalism the architects possibly imagined they were triumphing over. Such false — I might almost say fraudulent — humanism, with its willingness to sacrifice veritable human need to an arbitrary esthetic concept, does far more violence to the human spirit than the crudest kind of utilitarianism. There was a healthy gymnastic nakedness in L'Esprit Nouveau of the nineteen twenties that is lacking in the meretricious L'Esprit Nouveau of the 1960's. The Neo-Libertarians mistake novelty for originality, and never stay long enough with any new mode of construction or new materials to relate them to human needs or to explore even a fraction of their formal possibilities.

In town planning, as in architecture, this sterilization and dehumanization has already gone far. In many American metropolises, notoriously Los Angeles and Detroit, the planners have already effectually destroyed the city in order to give pre-eminence to a purely subsidiary service, that of the private motor car; and during the last ten years, the same misplaced enthusiasm for mono-transportation, despite its inefficiency and its wasteful demands on urban space, has gone on all over Britain and Europe: so that even the best-planned cities on the continent, like Amsterdam and Paris, have forfeited their most precious urban space to these over-prolific mechanical mistresses. The difficulty in repairing this situation springs from the fact that our contemporaries have already, in their hearts, accepted the supremacy

of the machine and the uncontrollable automatism of mechanical progress, and have resigned themselves to the secondary role that is now allotted to them. Who dares to call this ideal prospect life?

ALMOST a generation ago, in *Technics and Civilization*, I called attention to the new threat to man's development arising from the very success of modern technics in displacing human norms and human purposes: namely that the repressed aspects of life were already coming back in irrational forms, in the renascent cult of war, in brutal, murderous sports, in mass tortures and criminal delinquencies of every kind. Thus our preoccupation with measurable and controllable physical phenomena, to the exclusion of all other aspects of life, was producing a revengeful, all-too-human irrationality, bent on asserting in negative forms, the missing organic and human components. The whole man is in fact the chief enemy of those who still favor the indefinite quantitative expansion of scientific knowledge and physical power; for one of the first things that the whole man would do would be to curb this expansion and restore the more complex ecological pattern that includes organic and human capabilities not adequately served through or represented by any purely physical system.

The influence of the whole man is still far to seek: dismemberment is more fashionable. But what in fact is the meaning of so much that has been going on in the world of art during the last generation, with its symbolic representation of the primitive, the childish, the spontaneous, the inchoate and the unformed, except that it is a declaration that it is better to go back to the very beginning of man's development, and thus restore his original freedom, than to push on to the end of his present practices and commitments, and altogether forfeit his humanity? From this standpoint, Le Corbusier's church at Ronchamp, however faked and deliberately naive the elements in its composition, is a happy symbol of his own sudden awakening to the sterility of the images he himself did so much to make fashionable.

The moral of all these reactions is that life may not be denied: one must render to the machine only what belongs to the machine, and render to man all that belongs to man, or that, under a more divine impetus, transcends his biological limitations and his social necessities. This is not easy counsel, for in a disintegrating society destruction becomes a sort of negative creation. As a result, it is precisely those creative spirits, who should now be creating forms more fully expressive of the emergent potentialities of our life, who are constantly tempted to use the vast destructive forces at their command in the vain hope that they may turn them to more human ends. Consider even such a robust and self-confident personality as the late Frank Lloyd Wright, he who placed the family home and the garden at the very center of his architectural opus and was content, so long as each family had its acre of land, to let the city dissolve into a formless house-pocked landscape. Even Wright, at the end of his life, projected such an empty technological stunt as a skyscraper a mile high: a form both anti-urban and anti-human, devoid of either practical value or esthetic significance. Thus the last testament of this prophet of organic architecture was an anti-organic form conceived without any reference to its human functions and

purposes, nothing could better indicate the formidable social inertia that the human spirit must now overcome.

Those who wish flatly to reject my present observations will make their task easier if they misinterpret my position as an attack on modern science, or treat it as an attempt to point the way back to an archaic handicraft technology. But in doing that silly injustice to me they would do an even greater injustice to themselves. There is no instrument of technics, however complex and elaborate, from a completely automated factory to a worldwide telephone system, that modern man should not be ready to welcome when it is under constant human control and operated strictly for human ends. But, the simplest ancient tool or machine, a pickaxe, a plane, a loom, would still be a menace to human development if imposed by those who would reduce all human existence to mining, building, or weaving, alone. Our present plight comes not from science or technics as such, but from those who have turned the expansion of scientific knowledge and technical power into absolutes, to whose pursuit every other human interest and desire must be subordinated. These minds have turned every permission into a compulsion: instead of multiplying our choices, they have reduced them to those that would increase power, speed, quantity, automatism, external control. Every day the exploding universe of technics moves farther away from the human centre where it originated; and every day while this lasts the human figure continues to shrink to something less and less than life-size.

IN giving you these brief glimpses of my thoughts today, I have begun something I cannot hope to finish with in the allotted thirty or forty minutes. The primacy of organisms and personalities over mechanism and systems, the primacy of life itself above all its instruments and agents — that in a sentence is the substance of these rough suggestions and hints. In a sense my whole work may be considered as a kind of preface to what I have been saying today; but those who understand my philosophy best will know that it can never be fully formulated in words alone, but must be felt, imagined, enacted, and lived.

And where does that leave the architect? In the central position he has always occupied — as the mediator between natural conditions, mechanical necessities, and human purposes, as the continuator and integrator of a long human tradition that goes back to the paleolithic caves. The task for the architect today is not simply to interpret the demands made by the machine and the mechanical collective, nor yet to confine human purposes to the conditions that they would impose. For the coming generation a far more challenging problem presents itself: that of integrating mechanisms, organisms, societies, and personalities into new structures that will fully embody and progressively reveal the nature of life itself. The architect of tomorrow will embody life in all its complexity and subtlety, its cumulative historic richness and its continued creativity. The order that now beckons us will confine the machine to the house of life, and make man himself, as never before, at home in every chamber of that house: the visible master of his domicile. So have faith and be of good cheer: the human race always behaves best when the odds are against it, and, if we do not flinch or retreat, life may still happily surprise us.

The Canada Council

TO MANY OF US THE WORDS CANADA COUNCIL are familiar and we have come to accept the role we understand the Council is playing in the cultural development of this nation. But how clearly are the objects of the Council known to members of the architectural profession and to the Canadian public at large. Section 8 of the Act, which brought the endowment fund of the Council into being, states that the objects of the Council are "to foster and promote the study and enjoyment of, and the production of works in, the arts, humanities and social sciences; to assist, co-operate with and enlist the aid of organizations the objects of which are similar to any of the objects of the Council; to provide through appropriate organizations or otherwise for grants, scholarships or loans to persons in Canada for study or research in the arts, humanities or social sciences in Canada or elsewhere or to persons in other countries for study or research in such fields in Canada; to make awards to persons in Canada for outstanding accomplishment in the arts, humanities or social sciences; to arrange for and sponsor exhibitions, performances and publications of works in the arts, humanities or social sciences; to exchange with other countries or organizations or persons therein knowledge and information respecting the arts, humanities and social sciences; and to arrange for representation and interpretation of Canadian arts, humanities and social sciences in other countries."

It is difficult to make a precise assessment, in concrete terms, of the value of the Canada Council program. The round figures for the program indicate that in the four years of the Council's existence it has given a total of over 2,200 scholarships and fellowships, of which approximately 1,670 have been in the humanities and social sciences. These awards were made for the purpose of assisting in graduate studies leading to advance degrees and in individual research. The total value of the entire scholarship and fellowship scheme has been \$4,510,000, of which \$3,385,000 were spent on the humanities and social sciences. In addition to this impressive sum must be added approximately \$1,000,000 for research projects, travel and the publication of books, journals, and learned papers. The rough total for the humanities and social sciences has thus mounted over the four years to \$4,380,000.


To quote the introduction to the Council's Fourth Annual Report for 1960 - 1961 "these are concrete, measurable achievements. But the justification of the work of the Canada Council in the humanities and social sciences is not confined to the new books published, or the number of young men and women prepared for

teaching careers. The ultimate justification of scholarships in the humanities and social sciences is that it constantly nourishes the intellectual life of the nation. The scholar in these fields may not often solve immediate problems; he may not add to the immediate comfort of life; but by expanding our intellectual horizons and deepening our insights, he gives us the wisdom, maturity and judgment whereby we can make major decisions with ever greater confidence. He helps us to escape the tyranny of the present, for he knows that fundamental problems have remained the same throughout the centuries, and that he who is ignorant of the past is doomed to repeat its errors."

"The objects of the Council in spending these large sums of money are to foster ability among those who have it; to find ways in which it can maintain active organizations by helping them to continue and enrich the work they are doing; to provide for the people of Canada a more attractive and more varied mental and spiritual fare through theatres, opera, ballet, festivals, other 'cultural' enterprises, an appetite for which has always existed and is now increasing."

An example of how the Council can assist national organizations to make a contribution is shown in the provision of a Council grant in 1960 to the Royal Institute for the purpose of developing the first stage of a national inventory of buildings considered to merit preservation because of their architectural or historic worth. In this case the granting of the small sum of \$3,500 enabled the RAIC Committee on the Preservation of Historic Buildings to develop a useful program in close co-operation with the Historic Sites Division of the Department of Northern Affairs and National Resources. The outcome, it now appears likely, will be the development in due course by the Federal Government of a new government-sponsored staff who will have the responsibility of completing a national inventory of historic buildings based on a carefully worked out plan.

Difficult as it may be to assess the value of each individual grant, one cannot but agree with Canada Council "that the arts, humanities and the social sciences have moved forward in this country with the assistance of the policies and the money of the Canada Council." The achievement makes itself felt. As they themselves state, "given the resources for the job, there would seem to be little doubt that as much more can be done in the next four years as has been accomplished in the last".



Le Conseil des Arts du Canada

LE NOM DU CONSEIL DES ARTS DU CANADA est aujourd'hui familier à plusieurs d'entre nous. Nous avons fini par accepter le rôle que nous voyons cet organisme jouer dans le développement culturel de notre pays. Cependant, pour ce qui est des objets du Conseil, jusqu'à quels point sont-ils véritablement connus des architectes et des Canadiens en général? L'article 8 de la loi qui a constitué la Caisse de dotation précise que le Conseil a pour buts de développer et de favoriser l'étude et la jouissance des arts, des humanités et des sciences sociales, de même que la production d'oeuvres s'y rattachant; d'aider aux groupements dont les objets sont semblables à l'un quelconque des buts du Conseil, de coopérer avec ces groupements et s'assurer leur concours; de pourvoir, par l'entremise de groupements compétents ou d'autre façon, à des subventions, bourses d'études ou prêts à des personnes au Canada pour des études ou recherches dans le domaine des arts, des humanités ou des sciences sociales, en ce pays ou ailleurs, ainsi qu'à des personnes en d'autres pays pour des études ou recherches dans ces domaines au Canada; de décerner des récompenses à des personnes au Canada, qui ont acquis un mérite exceptionnel dans les arts, les humanités ou les sciences sociales; de préparer et prendre en charge des expositions, représentations et publications d'oeuvres portant sur les arts, les humanités ou les sciences sociales; d'échanger avec d'autres pays, ou avec des groupements ou personnes s'y trouvant, des connaissances et renseignements sur les arts, les humanités et les sciences sociales; et de prendre des dispositions en vue de la représentation et de l'interprétation d'humanités, de sciences sociales ou d'arts canadiens dans d'autres pays.

Il est difficile d'apprécier de façon concrète et précise la valeur du programme du Conseil. Disons qu'au cours de ses quatre années d'existence celui-ci a accordé plus de 2,200 bourses d'études et de perfectionnement, dont environ 1,670 dans les domaines des humanités et des sciences sociales. Les sommes ainsi dépensées visaient à aider des étudiants à obtenir des diplômes supérieurs et à favoriser la recherche individuelle. Le montant global de ces bourses atteint \$4,510,000, dont \$3,385,000 ont servi aux humanités et aux sciences sociales. A cette somme impressionnante, il faut ajouter près d'un million de dollars consacrés à des travaux de recherche, à des voyages et à la publication de livres, de journaux et d'ouvrages scientifiques. Ainsi, le montant consacré aux humanités et aux sciences sociales au cours de ces quatre années est de l'ordre de \$4,380,000.

Ainsi que le Conseil le signale dans l'introduction à son quatrième rapport annuel, celui de 1960-1961, "Ce sont là des faits concrets, qui peuvent être mesurés. Cependant, le Conseil ne saurait justifier son travail dans les domaines des humanités et des sciences sociales en mentionnant les livres publiés ou le nombre de jeunes

hommes et femmes formés à des carrières dans l'enseignement. Les bourses d'étude en humanités et en sciences sociales trouvent leur véritable justification dans le fait qu'elles assurent un apport constant à la vie intellectuelle de la nation. Les boursiers dans ces domaines n'arriveront peut-être pas à trouver la solution aux problèmes de l'heure; ils n'ajouteront peut-être rien au confort de la vie quotidienne mais, en élargissant nos horizons et en approfondissant nos idées, ils nous apportent la sagesse, la maturité et le jugement nécessaires pour prendre de grandes décisions avec plus de confiance. Ils nous aident à éviter la tyrannie, car ils savent que les grands problèmes ont toujours été les mêmes au cours des siècles et que quiconque ignore l'histoire tombe inévitablement dans les erreurs du passé."

En dépensant ces sommes considérables, le Conseil vise à développer les talents de ceux qui en ont, à trouver les moyens de maintenir des organisations actives en les aidant à continuer et à enrichir leur travail, et à assurer à la population canadienne un aliment intellectuel plus varié au moyen du théâtre, du ballet, de l'opéra, des festivals et d'autres entreprises "culturelles", dont le désir, qui a toujours existé, devient de plus en plus vif de nos jours.

Un exemple permettra de démontrer comment le Conseil peut aider des organisations nationales à jouer un rôle important. En 1960, le Conseil a versé à l'Institut d'architecture une certaine somme afin de lui permettre d'organiser le premier stade d'un inventaire national des bâtiments qui, par leur valeur architecturale ou historique, méritent d'être conservés. Le montant était assez modeste, \$3,500 seulement, mais avec cette aide et l'étroite collaboration de la Division des lieux historiques du ministère des Affaires du Nord canadien et des Ressources nationales, le Comité de l'IRAC sur la préservation des édifices historiques est parvenu à organiser un programme d'une grande utilité. En conséquence, il semble bien qu'en temps opportun, le gouvernement fédéral formera du nouveau personnel qui sera chargé de faire un inventaire complet des édifices historiques selon un plan soigneusement élaboré.

Même s'il est difficile d'établir la valeur de chaque subvention particulière, il faut admettre avec le Conseil que "les arts, les humanités et les sciences sociales se sont développés au Canada grâce aux fonds et au programme du Conseil. Les progrès se font déjà sentir. Et pour terminer en citant une autre déclaration du Conseil: "Avec des ressources suffisantes, il serait sûrement possible d'accomplir au cours des quatre prochaines années deux fois autant que nous avons accompli au cours des quatre années écoulées."

Editor, RAIC *Journal*:

May I, through the *Journal*, invite the attention of young architects in Canada to opportunities to gain experience for a year or two in the United Kingdom.

As you know, the amount of building work in this country is unprecedented, and architects are not leaving the schools of architecture in sufficient numbers to meet the demands on the profession. There is therefore an excellent opportunity for experience for any newly qualified architect, or for one with only a year or two's practice, who wishes to come to this country to further his knowledge. If there are such young men and women, I suggest that it would be more profitable to them and to the receiving office if the period of engagement is not less than twelve months, although two years would be most welcome.

This office is typical of the County Authorities in this country and we have a very varied program of work ranging from a new Shirehall to house the whole of the County administration (including council chamber, committee rooms and members' suite), to schools, fire stations, hostels, technical colleges and health clinics. We have a total establishment of about 95, of which 30 are architects, the remainder being engineers, quantity surveyors, land surveyors, maintenance inspectors and administration. It would be possible to pay a newly qualified man on the scale

£960 - 1140 per year, and one who has three or four years' experience on the scale £1140 - 1310 per annum.

I should be grateful if you would pass this information to your members, and no doubt anyone interested will write to me direct.

Ralph Crowe, County Architect,
Salop County Council, Shrewsbury.

Editor, RAIC *Journal*

The Fourteenth Annual Convention of the International Builders Exchange Executives was held in Cleveland, Ohio, over June 12 - 15.

During the proceedings, Builders Exchanges from many cities in Canada and the United States discussed at some length all phases of plan room operations.

Our retiring president, Chas. J. W. Jauch, of Cleveland, stated, "From what I have learned at this meeting, there is complete co-operation between the professional organizations such as the Royal Architectural Institute in Canada and the Architectural Institute of America in the United States by graciously providing plans and specifications to the plan rooms of Builders Exchanges. They have enhanced the value and service of our organisations to our members and to the construction industry".

A resolution was then read into the convention records voicing appreciation to the AIA and all its chapters

and the RAIC and all its chapters for outstanding co-operation in providing plans and specifications to Builders Exchanges.

On behalf of the IBEE Canadian members, we would greatly appreciate having our thoughts and feelings passed along to all chapters of the RAIC.

Norman M. Fraser, Manager,
Toronto Builders Exchange.

Editor, RAIC *Journal*:

Your coverage of the three most recent air terminals in Canada was excellent. However, we feel that credit should have been given to the designers of the interiors and of the interior furnishings. In seven of the interior photographs, furniture designed by Robin Bush Associates for Canadian Office and School Furniture was prominently displayed. In others, there was furniture by Knoll International Canada Ltd, and by Chris Sorenson for Jacques Guillon Associates, Montreal. Jacques Guillon Associates should also have been credited as interior design consultants for Dorval.

Norman M. Hay, Toronto.

The VIth Congress IUA

The Sixth Congress of the International Union of Architects was held in London, England, on the South bank of the River Thames at a temporary headquarters building and the Royal Festival Hall. Seventeen hundred and twenty architects, planners and representatives from allied fields registered for the session, which lasted from July 3rd to July 7th. Sixty-four nations were represented, not all of which were actual members of the International Union Organization. Ten Canadian architects and one Canadian interior designer attended the Congress, although Canada is not yet a member of this Organization.

The Congress Headquarters consisted of a pair of buildings, one used for administrative work, and the other for exhibition purposes. The IUA buildings were designed by Theo Crosby in collaboration with a group of sculptors, artists, and engineers, who displayed a great deal of ingenuity and imagination in a great co-operative effort. The exhibition building contained a central reception area with a circular enclosure

in which architectural publications from all countries were displayed and catalogued.

One wing of the exhibition building was devoted entirely to photographic presentation of completed architectural works, representing a cross-section of the work of all countries participating in the Congress. The other wing contained an exhibition of students' designs which were submitted in a world-wide competition for a transportable and demountable theatre. Architectural schools throughout the World held competitions and submitted the winning entries for display and final judging at the Congress.

In addition to the working groups and general assemblies a program of conducted tours was arranged to familiarize the world's architects with the work being done in London and the surrounding area. The tours included coverage of traditional work, local government and private housing, tours of London's post war schools and a comprehensive coverage of the medium density housing constructed under the direction of the London County Council. A post congress tour was also

INSTITUTE NEWS

organized for the benefit of visiting architects who wish to tour England and Scotland.

Many formal receptions were held by government and university officials to honor the delegates attending the Congress. The opening session was addressed by Antony-Armstrong Jones, and Prince Phillip visited each of the architectural working groups during the sessions and met the delegates from each country.

The Conference theme was "New Techniques and Materials - Their Impact on Architecture." The papers presented for discussion were:

Paper 1: By Henry Russell Hitchcock - "A general survey of architectural change caused by the emergence of new techniques and materials."

Paper 2: By Peri Luigi Nervi - "The influence of reinforced concrete and technical and scientific progress on the architecture of today and tomorrow."

Paper 3: By Prof Jerzy Hryniewiecki - "The effect of industrialization on architecture."

Among those in attendance were Louis Mumford, Buckminster Fuller, Felix Candela, and other outstanding personalities familiar to the architectural profession. Each took an active part in the discussions held in the various working groups.

Using simultaneous translation facilities, the Congress was split into three main working groups, each discussing the three papers presented to the Congress by the principal speakers.

The paper presented by the President of the Association of Polish Architects, Prof Jerzy Hryniewiecki dealing mainly with the emergence of industrialization as a force for the twentieth century architects to contend with, seemed to provoke the greatest amount of discussion and interest.

Considerable alarm was expressed by some countries over the possibility that industrialization would rule the architect, and that dehumanized, monotonous, sterile and uninteresting work would result. Other architects, particularly those from overpopulated, underdeveloped, or war torn countries, expressed the view that industrialization of the construction technique was a tool which the architect must utilize in order to successfully cope with the demand for housing accommodation of the earth's people.

The Russian delegation voiced the opinion that housing accommodation had to be constructed for one and one-half billion people by the year 2000. This estimate was based on the assumption that one-half billion people today require housing due to substandard or subhuman living conditions now in existence, and a forecast population increase of one billion people. Gigantic prefabrication equipment is presently being utilized in Moscow to construct 250 apartments per day to cope with housing shortage. Czechoslovakia indicated that one million apartment units were required at the present moment and that industrialization and prefabrication were the answer to their present needs. The United Arab Republic delegation reported that a population increase of 600,000 per year required the attention of their architects, planners and public works departments. 45,000 housing units will be required to replace dwellings flooded by the construction of the Aswan Dam alone. South American delegates also expressed the view that industrialization and mass housing were urgently required to cope with their housing problems.

The Co-ordinating Committee prepared a list of conclusions on which the Congress as a whole seemed to be agreed:

1. That industrialization and new

technical developments have a major part to play in future architecture, especially in solving the housing problems of the world's growing population and its improving standards of living, and that architects must be prepared to adapt their work to this fact.

2. That although new techniques and materials can do much to open up new possibilities for architecture, research is needed to ensure that their use is related to the needs of different countries and climates, and that note is taken of the difference between countries, how they developed industrially, and of those less developed.

3. However fully architecture accepts new techniques and materials, it must be in order that architectural ends shall be served. Man must remain master of the machine. The exploitation of industrialized building processes must begin by studying the social and human needs that buildings have to serve.

4. That industrialization is not an isolated technical process, and that acceptance of a trend towards more industrialization means that the architect must work in closer co-operation with the builders, industrialists, town planners and others. He is, however, the one member of the building team with a view of the whole problem and he must select and synthesis the activities of others to see that the ultimate end is kept always in view.

In addition, the Co-ordinating Committee, under the direction of Rapporteur General J. M. Richards, agreed that the following basic issues need to be followed up and will be put before Permanent Working Commissions of the IUA.

1. *Difficulties of international communication owing to the inexact definition of terms.*

2. *The need for architectural education to be looked at afresh in relation to the industrialization of buildings.*

3. *The need to study means of closer co-operation between architects, the building industry and related professions.*

4. *The need to investigate the results of the existing technical developments, especially from the users point of view.*

The Seventh Congress will be held in Havana, Cuba, in 1963. The Mexican delegation advised the Congress that a special architectural exhibition will be held in Mexico City immediately following the Congress meeting in Havana. All delegates were invited to attend.

Prof Robert Matthew was elected President of the International Union of Architects for the next four year term,

and Yang Ting Pao of China Vice-President.

The Secretary General of the International Union of Architects, Pierre Vago of France, outlined the work of the Union to the writer and discussed at length the advantages of Canadian membership. A formal report is being forwarded to the RAIC Executive together with recommendations regarding active Canadian participation.

The International Union of Architects is presently the primary contact between the United Nations Organization and the architects of the world. Permanent working committees and advisory groups work in close co-operation with UNESCO and the World Health Organization.

A general feeling of friendliness, co-operation and eagerness to exchange ideas, permeated the entire fabric of the assembly. Many friendships were made which will endure. Continuing contact between individual participants in the Congress will undoubtedly prove to be stimulating and rewarding as a greater sense of internationalism pervades the architectural, and subsequently, the general human environment.

Joseph Pettick, Regina.

Executive to Meet September 22-23

President Harland Steele of Toronto has issued a call to members of the RAIC Executive Committee to meet at the Institute headquarters in Ottawa on Friday and Saturday, September 22 and 23. This will be the first Executive Session since the 1961 Convention at Quebec in mid-May.

The 1961-62 Executive Committee members, in addition to the President are: John L. Davis (F) Vancouver, Vice-President; F. Bruce Brown (F) Toronto, Honorary Secretary; Randolph C. Betts (F) Montreal, Honorary Treasurer; Maurice Payette (F) Montreal, Past President; and C. A. E. Fowler (F) Halifax; Francis Nobbs (F) Montreal; George Y. Masson (F) Windsor; Alvin Prack (F) Hamilton; G. Everett Wilson (F) Toronto; and James Searle, Winnipeg.

Prior to the Executive Committee Session the semi-annual meeting of the National Joint Architect-Engineer Committee, comprising five members each from the RAIC and the Canadian Council of Professional Engineers, will be held on the afternoon of Thursday, September 14.

The President will table a report received from Joseph Pettick, Regina, Chairman of the recently established International Relations Committee, who was the official RAIC representative at the Sixth Congress of the International Union of Architects in London, England.

R. L. Elliott, Institute Executive Director, will present a report on action taken by the Institute since May to implement eight resolutions adopted by the 1961 Annual Assembly at Quebec. G. Everett Wilson (F) will report on progress made by the RAIC Premises Committee to acquire a new Institute headquarters site in Ottawa.

The Executive Committee will also receive a report from James Murray (F), Chairman of the Joint RAIC-CMHC Committee on Housing, recommending action to be taken by the Institute co-incidental with the completion at September 30 of the RAIC program to implement the proposals contained in the 1960 Report of the Committee of Inquiry into the Design of the Residential Environment.

It is anticipated that Edmund Fox of Ottawa, who joined the Institute in November 1960 as special assistant in charge of Inquiry report implementation, will return to new staff duties at Central Mortgage and Housing Corporation at the end of September.

ULC Semi Annual Supplement

The Underwriters' Laboratories of Canada has issued Semi-Annual Supplement No. 1 to the September, 1960, List of Inspected Appliances, Equipment and Materials. Copies are available from Underwriters' Laboratories of Canada, 7 Crouse Road, Scarborough, Ontario.

Building Research Congress in U.K.

An International Building Research Congress is to be held in Cambridge, England, from September 6 to 11, 1962. The Congress is being organised by the International Council for Building Research Studies and Documentation, and is a successor to the first such Congress held in Rotterdam in 1960. The theme of the 1962 Congress will be "The Influence of Changing Require-

Tentative plans for a meeting of RAIC Council representatives at Montreal or Toronto in January 1962 are expected to be outlined at the September meeting, and a preliminary outline of the program of the 55th Annual Assembly at Victoria next May 30 - June 3 will be discussed.

Maurice Holdham, MBE, of Ottawa, newly-appointed Secretary of the Institute, will attend his first full meeting of the Executive Committee.

Sculpture Exhibit for Ottawa

The National Gallery has announced that an outdoor exhibition of sculpture is being arranged for Ottawa in July and August of next year. The purpose of the exhibition is to stimulate and encourage sculptors and to present, in a park area, for the benefit of the Capital's many summer visitors, the best of recent sculpture being produced in Canada. Entries are invited from all sculptors in Canada and financial assistance for the transportation of the works to Ottawa will be given to those

entrants whose work is selected. Entry forms and regulations will be available later from the Curator of Canadian Art at the National Gallery.

Ceylon Institute of Architects

It is with much pleasure that the *Journal* welcomes a new professional architectural publication, the first Annual Journal of the Ceylon Institute of Architects, which reached us recently via RAIC Headquarters in Ottawa. In size and format much like our own *Journal*, the first issue of the new publication contains a vigorous editorial by the Honorary Editor, Mr Herbert Gonsal; a message from Sir Basil Spence, then President of the RIBA, welcoming the Ceylon Institute as an allied society to the Royal Institute of British Architects; a number of articles of architectural interest; some examples of work by architects in Ceylon; and lastly the names and photographs of the Institute's twenty-seven members. The Ceylon Institute of Architects was founded in 1957.

NOTICES

ments and Development in Materials and Components on Design and Construction". Further information may be obtained from the Division of Building Research, NRC, Ottawa.

Course on Building at Rotterdam

The 4th International Course on Building (efficient building methods) will be held at the Bouwcentrum, Rotterdam, the Netherlands, from October 30, 1961, to April, 1962. The course, which is conducted in English, gives advanced training at a post-graduate level. Candidates must therefore possess degrees in architecture or engineering. Tuition fee is approximately \$700. Enquiries should be directed to the Bouwcentrum, 700 Weena, Postbox 299, Rotterdam.

TPI Gold Medal Award

Sir William Holford, President of the Royal Institute of British Architects, has been awarded the Gold Medal of the Town Planning Institute. The last recipient, in 1957, was Mr Lewis Mumford, of New York.

Employment wanted

Position in Canada wanted by graduate of Indian Institute of Technology, Kharagpur, India, 1960, with B.A. and B.Arch (Hons.). Experience, Chandigarh 1960; since January, 1961, with architect's office in London. Age 27, single. R. L. Setya, c/o The Allied Circle, 46 Green Street, London, W.1.

Alberta

"Banff Session 62" Planned for Week of Jan. 28 - Feb. 3

Session '62 the latest in the regular series of week long Architectural Sessions sponsored by the Alberta Association of Architects will have for its theme "Architectural Design". Coordinating program director for the Session, John Russell (F), Director of the School of Architecture, University of Manitoba, announces that he has enlisted Albert Bush-Brown to act as lead-off speaker and personality. Mr Bush-Brown, well-known teacher, author and lecturer in architecture and presently associate professor in Architecture at MIT, will guarantee an interesting program of subjects and

discussions to stimulate and revitalize all architects planning to attend.

The list of further speakers, panel members and details of the program will be announced shortly.

Meanwhile, architects and planners interested in a "shot in the arm" for their professional ideals and wishing to stimulate their knowledge and interest in the field of architectural design should plan to spend a quiet week in the heart of the Rockies at Banff, Alberta, Jan 28th to Feb 3, 1962. The skiing should be good, the surroundings are terrific and the program is bound to satisfy.

Further details can be secured from the Executive Secretary of the Alberta Association of Architects, 312 North-

ern Hardware Building, Edmonton, Alberta.

Manitoba

John W. Graham, Associate Professor of Architecture at the University of Manitoba has been awarded a Canada Council Grant for summer travel study in Europe to investigate techniques and methods of stage production, the practice and teaching of stage design and lighting.

Following his graduation (B Arch) from the University of Manitoba in 1943 and graduate studies at the University of Syracuse and the Institute of Design, Prof Graham joined the staff

PROVINCIAL NEWS

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of the Manitoba School of Architecture in 1946. For seven summers he has directed the course in stagecraft at the Banff School of Fine Arts. He has designed stage settings for many productions of the Royal Winnipeg Ballet, the University of Manitoba Glee Club, the Winnipeg Little Theatre, and the Winnipeg Summer Theatre. He was co-designer of the street decorations in Greater Winnipeg for the Royal Visit in 1959. Prof Graham is presently Production Manager and Vice President of the Royal Winnipeg Ballet.

A letter from Television Station CJAY states that the two interviews during Architecture Week, dealing mostly with residential environment, were very well received by the viewing public. Kenneth Bacon, Public Relations Committee Chairman, and Morely Blankstein, Implementation of Residential Environment Committee Chairman, both appeared on "At Home", and Mr Bacon was interviewed on "Our Government".

With the help of a \$50.00 donation from the MAA, the exhibition "Mexican Architecture" was brought to Winnipeg and set up at the Red River Exhibition. Gerald MacDonald was vice president in charge of Exhibitions.

Two meetings were held recently by the MAA Council and committee chairmen involved in proposed revisions to the By-Laws. A special meeting of the MAA membership will be called in the fall to approve and adopt the complete set of revised By-Laws. It is interesting to note that the MAA has received enquiries from two other provincial associations concerning revisions to their By-Laws, one from Dr Howarth (OAA) regarding the registration of architects from the UK, the second from the NSAA on the granting of licences for temporary practice. Perhaps the time is ripe for all provincial associations to adopt one standardized set of By-Laws.

Henry D. Kalen.

New Brunswick

A summary of licensing requirements in various provinces presented at a meeting of the AANB at Sussex July 28, revealed that only one other province besides New Brunswick did not require outside architects to associate themselves with a local architect. The matter was referred to the Committee studying the revisions of the Act and By-Laws.

Saskatchewan

A Saskatchewan Symposium on Architecture will be held in Regina, October 20 - 21, 1961.

The purpose of the Symposium is to stimulate awareness of architecture in the province, to assess the present

situation, its problems and prospects, and to explore possibilities of what can be done to improve the cultural climate whereby better architecture and planning can be achieved. It is expected that between 150 and 200 delegates will attend representing architects, clients, users of architecture, artists and builders.

Guest speakers will be J. Burchard, Dean of Humanities and Social Science at MIT, whose subject will be "The Kind of Social Milieu Necessary to Create Good Architecture" and J. C. Parkin (F) of Toronto, speaking on "The Architect-Client Relationship from the Point of View of the Architect".

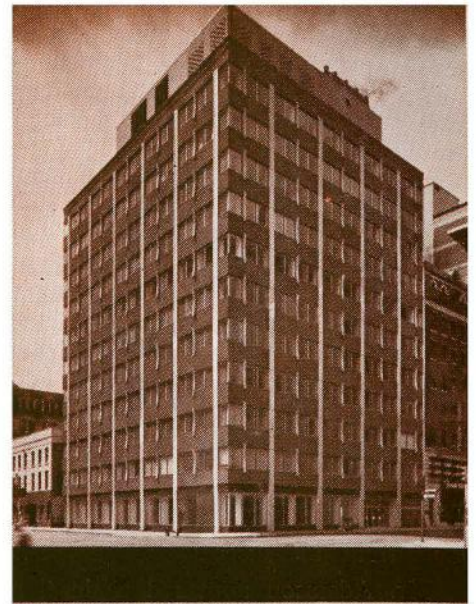
The Saskatchewan Symposium on Architecture is sponsored by the Saskatchewan Arts Board in co-operation with the Saskatchewan Association of Architects, Centre for Community Studies, and Community Planning Association as co-sponsors.

Stratford Seminar on Civic Design

The first Seminar on Civic Design was held at the Festival Theatre in Stratford over July 23-26. Sponsored by the Ontario Association of Architects, the Ontario Association of Professional Engineers, The Canadian Society of Landscape Architects, the Central Ontario and Ottawa Chapters of the Town Planning Institute of Canada, and the Ontario Division of the Urban Development Institute, the Seminar brought together for the first time in this way about a hundred architects, planners, engineers and others professionally concerned with the problems of civic planning, design and development.

Shakespeare and Gilbert and Sullivan occupied the evenings, and time was allowed for visits to a specially collected planning exhibit, which shared the arena with a well presented exhibition of the arts of French Canada of the 18th and 19th Centuries, and a collection of work by contemporary Quebec painters. The Festival Exhibition Hall nearby offered an exhibition of festival costumes and a fascinating and immensely valuable loan exhibition of books, including Shakespeare's First Folio and many other contemporary impressions.

The three-day affair, including a hot and humid preceding evening for registration and introduction, was useful, instructive and stimulating, not for the appearance of any radically new solutions or approaches to the problems which beset our communities, but for the opportunity afforded the participants to discuss their experiences and problems with others in the same and



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related different fields. Much of this kind of discussion took place within small study groups, each allotted a subject and required to later express their conclusions to the whole assembly through a rapporteur.

Much of the success of the Seminar was due, (in addition of course to the hard work of the organizers), to the selection of the principal speakers, and secondly to their contributions. A.P.C. Adamson (F) set the Seminar on its proper course, after greetings from the Provincial Government had been extended by the Hon. Ray T. Connell, Minister of Public Works, and after Tom Patterson, the founder of the Stratford Festival, had explained how the Festival came about and to what he attributed its success.

Mr. Adamson appeared again the next day on the subject of "What Went Wrong", a competent and illuminating examination of the history of planning in Ontario, leavened by those asides and terminal witticisms for which he is noted, yet presented in such a way as to leave much work for the study

groups to take up where he left off.

The following day Humphrey Carver, chairman of the CMHC Advisory Group, endeavoured to answer the question "What do we want" — and the third principal address was given on the last day by James A. Murray (F), after an inconclusive general session on how to achieve better cities. Speaking on "The Components of Civic Design", Mr. Murray explained what the term had meant to various people through the ages, and related the Seminar discussions to its meaning today.

A second Seminar on Civic Design is planned at Stratford next summer.

October 20-21
1961

Provincial Symposium on Architecture
Regina, Sask.

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INDUSTRY

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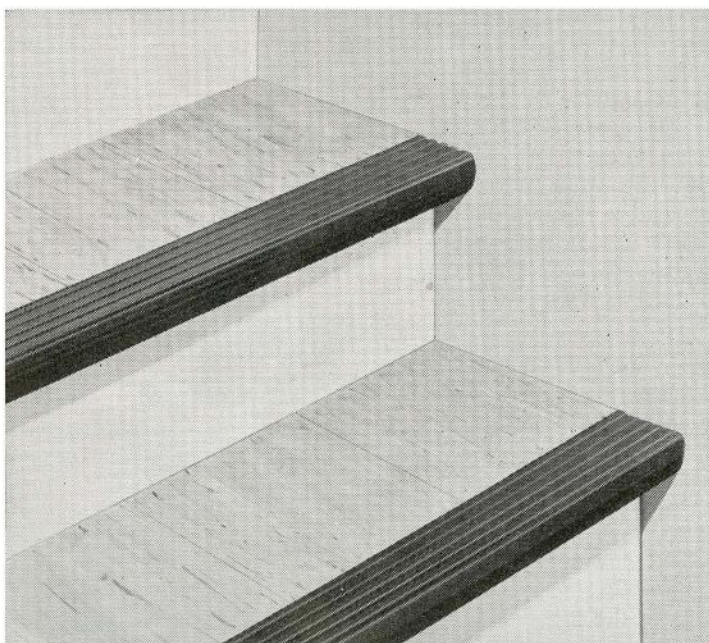
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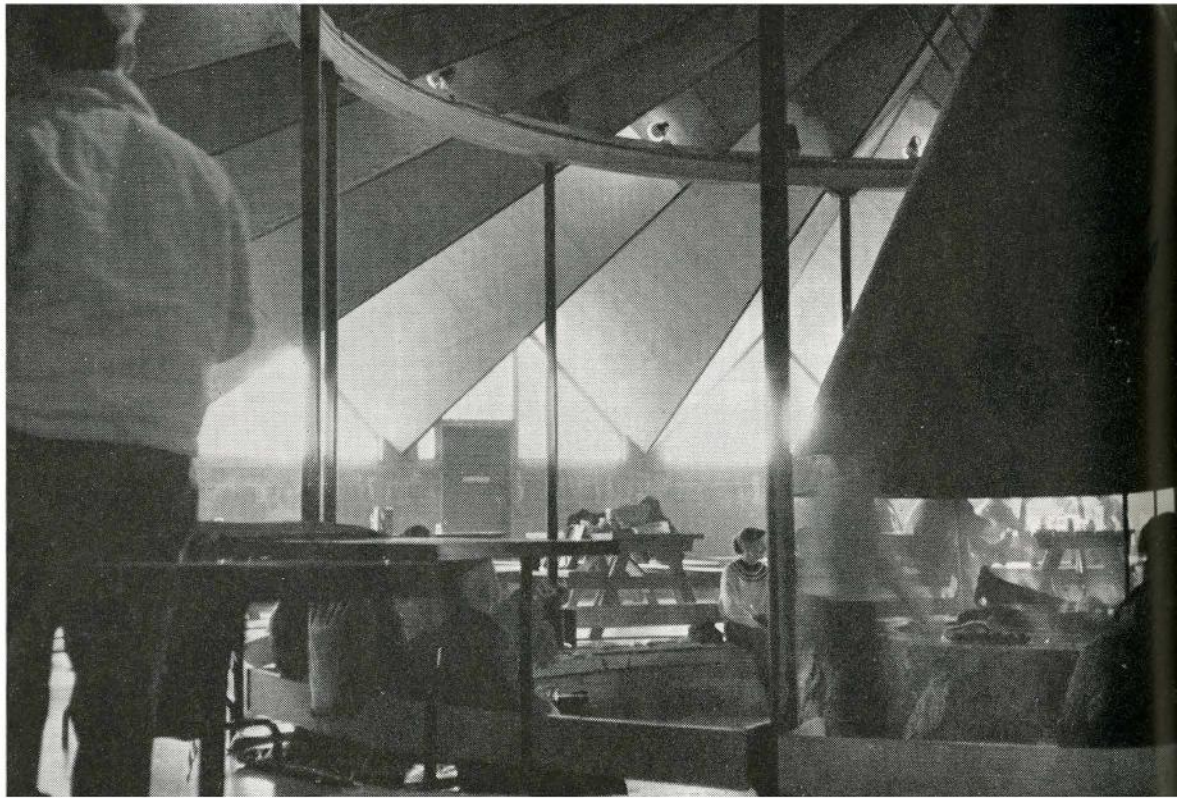
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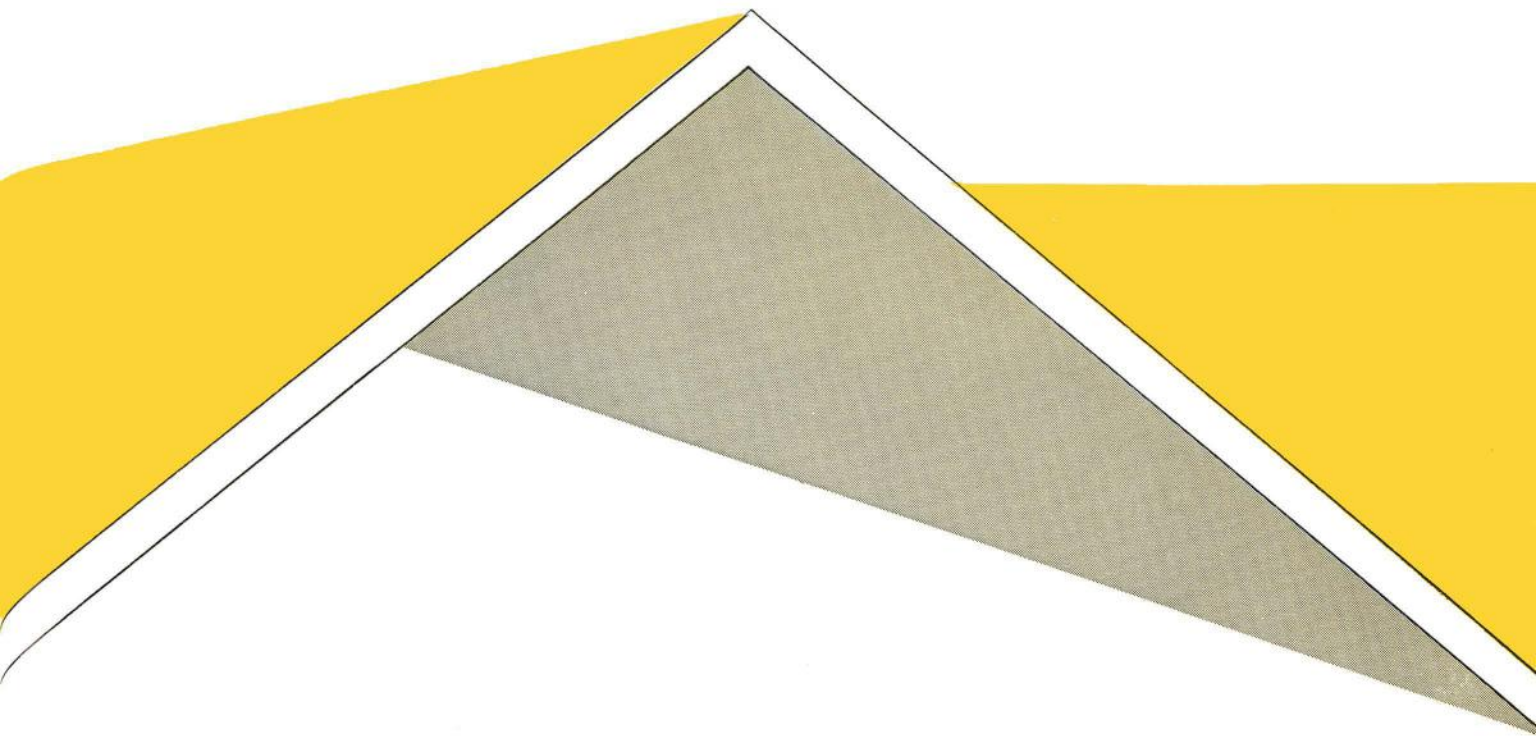
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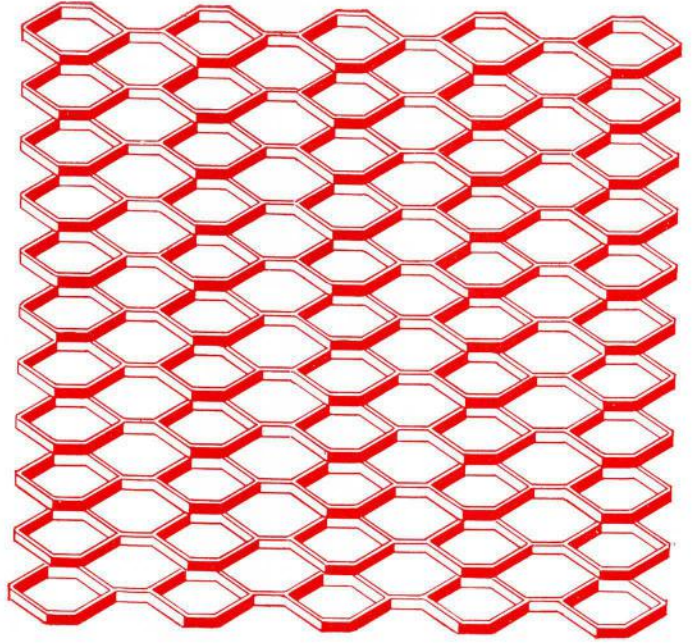
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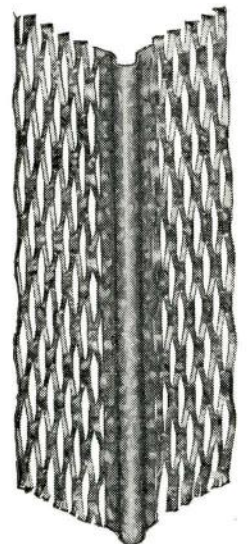
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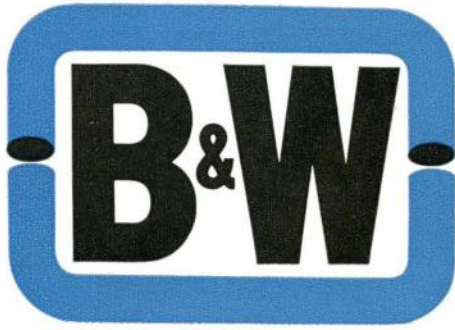
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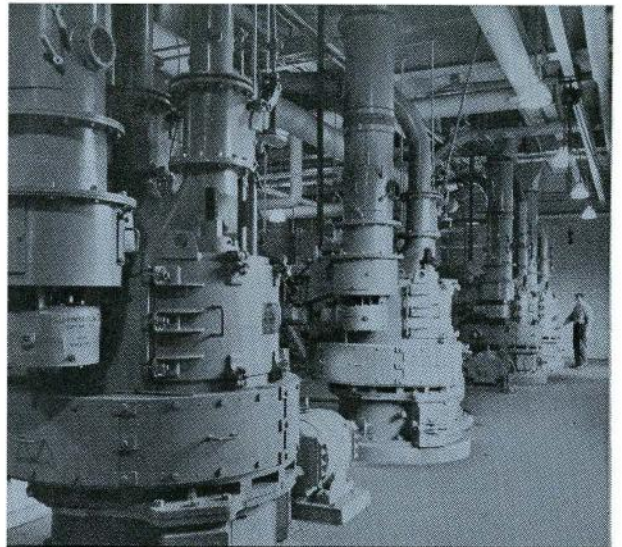




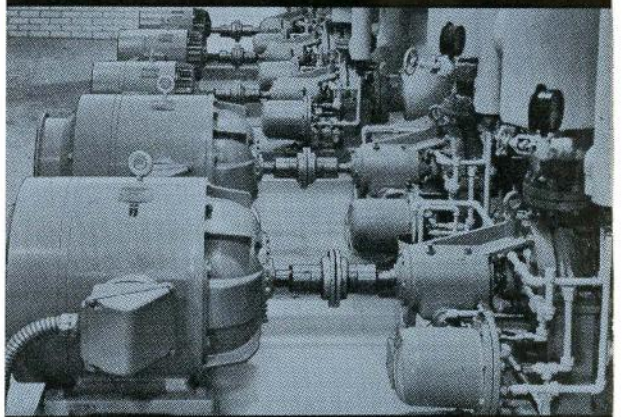
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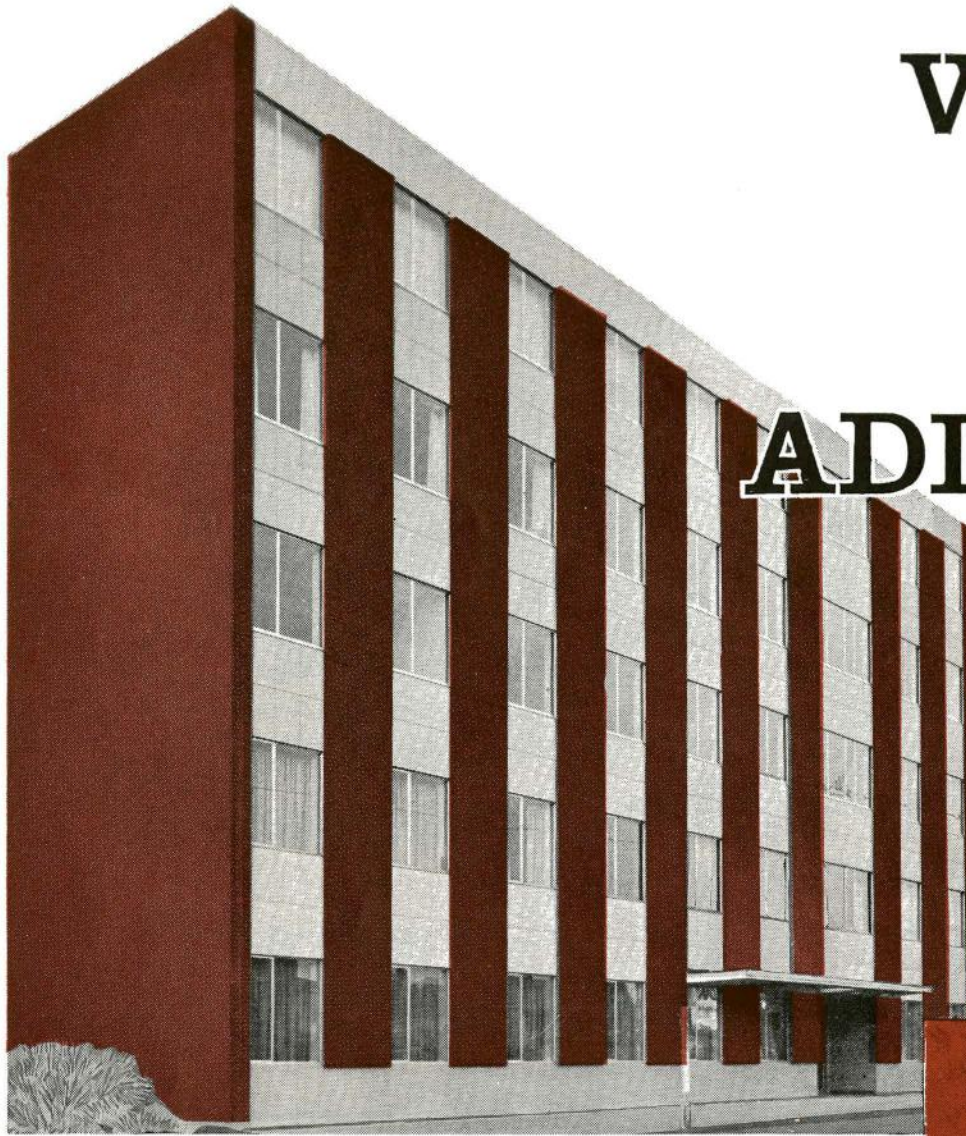
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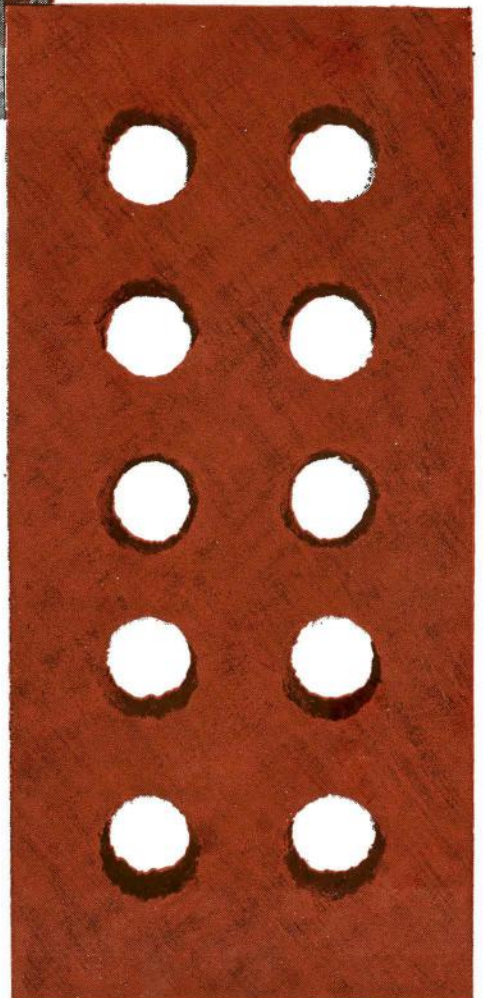
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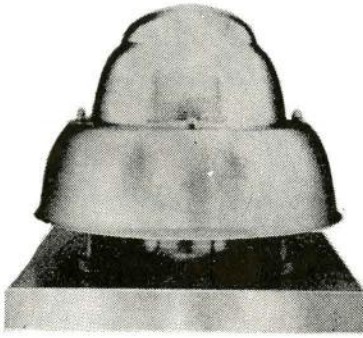
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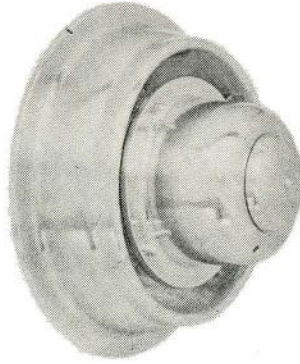
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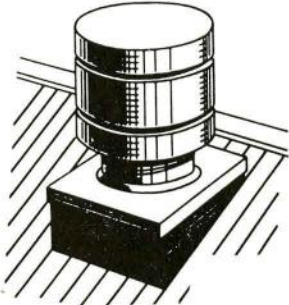
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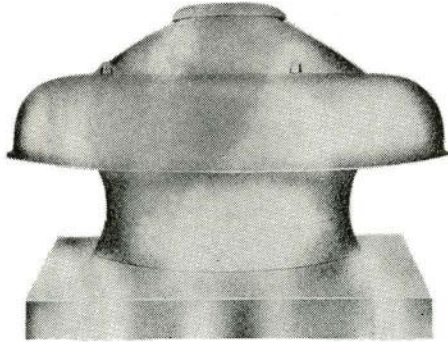
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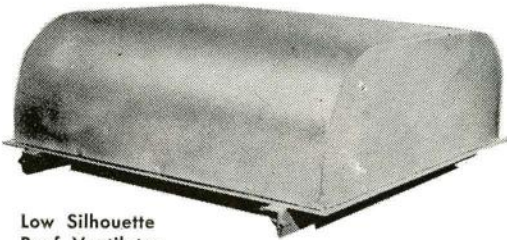
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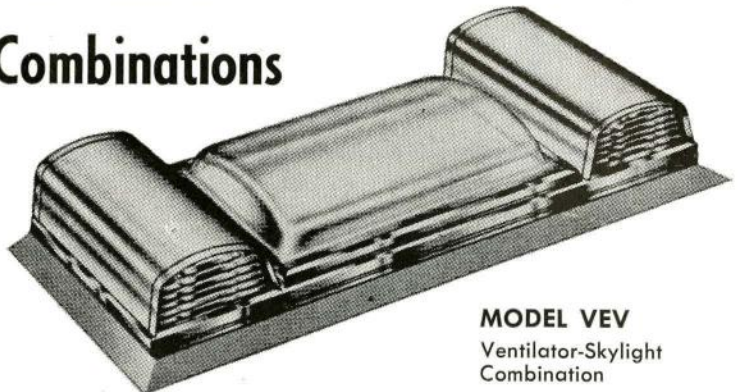
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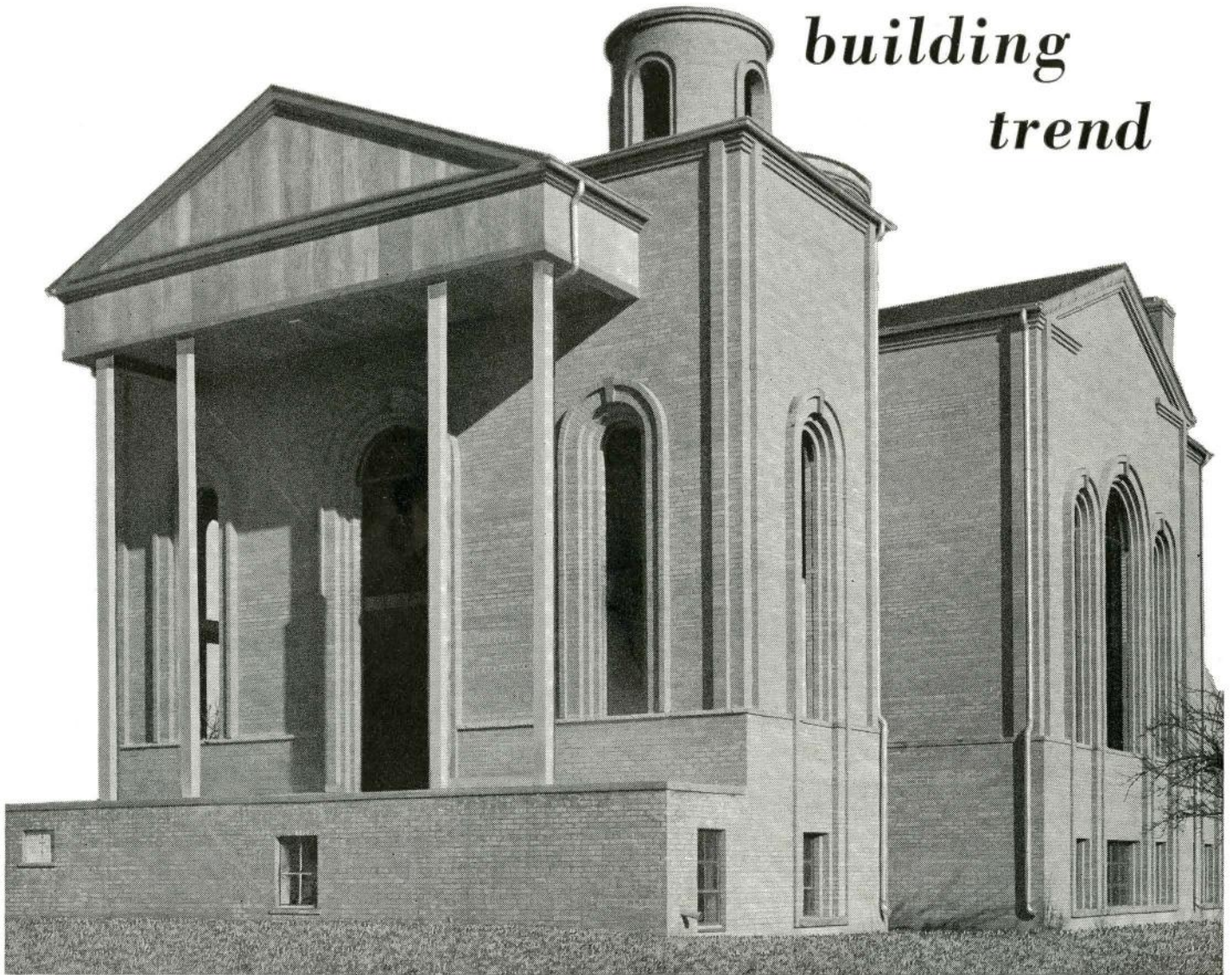
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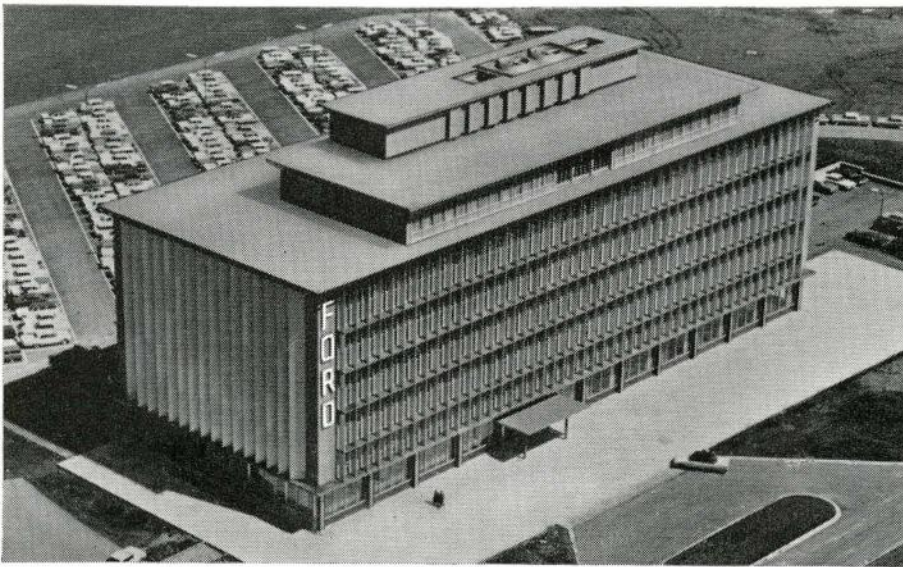
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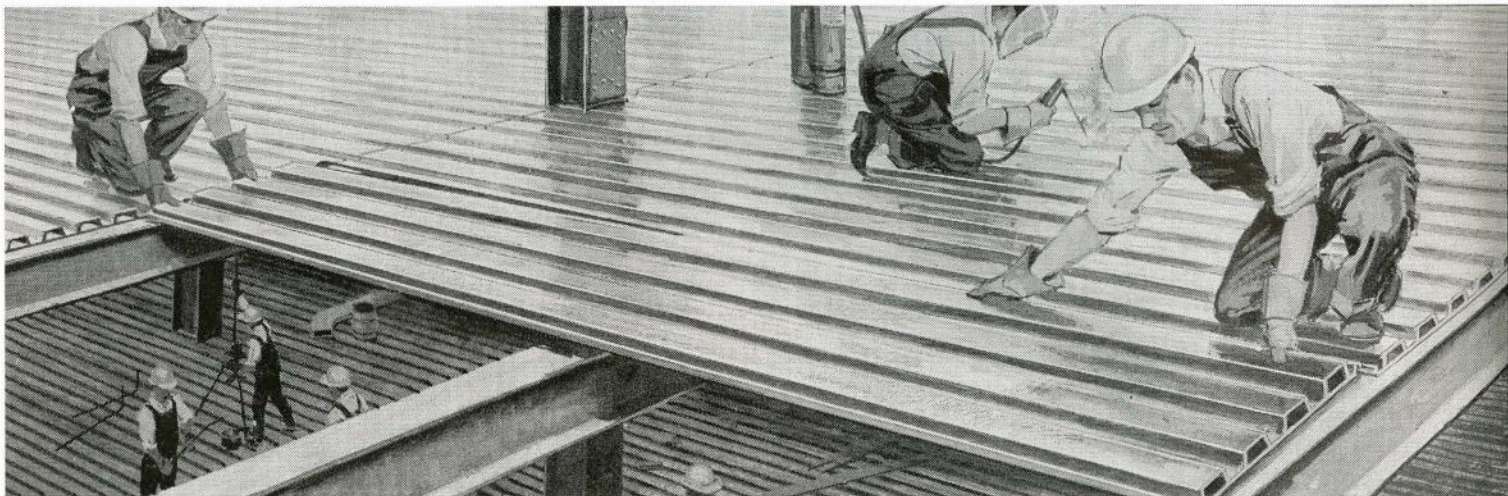
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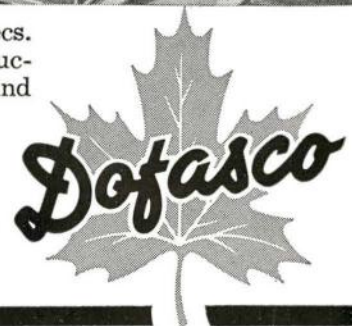
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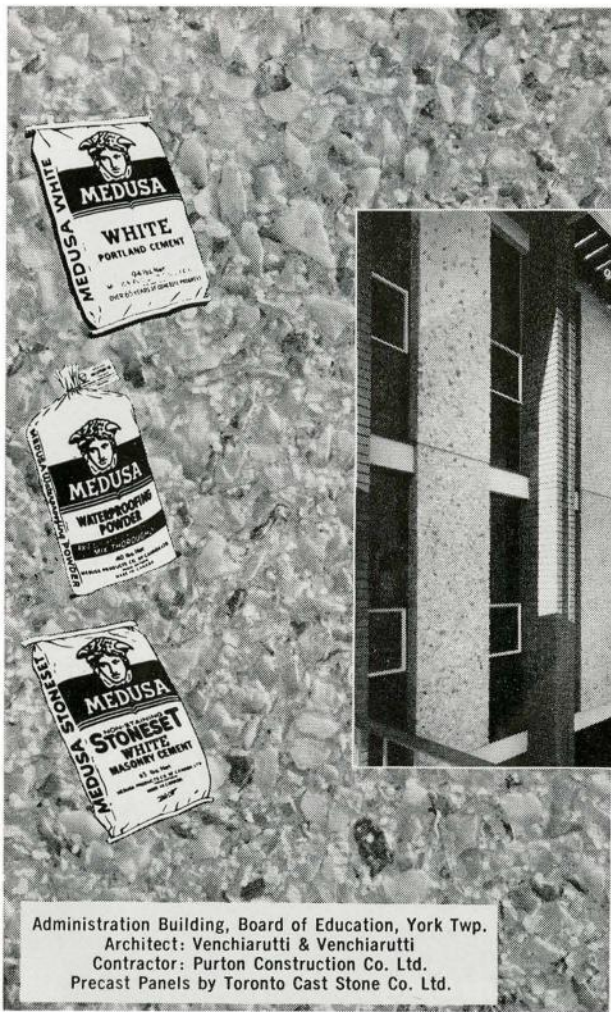
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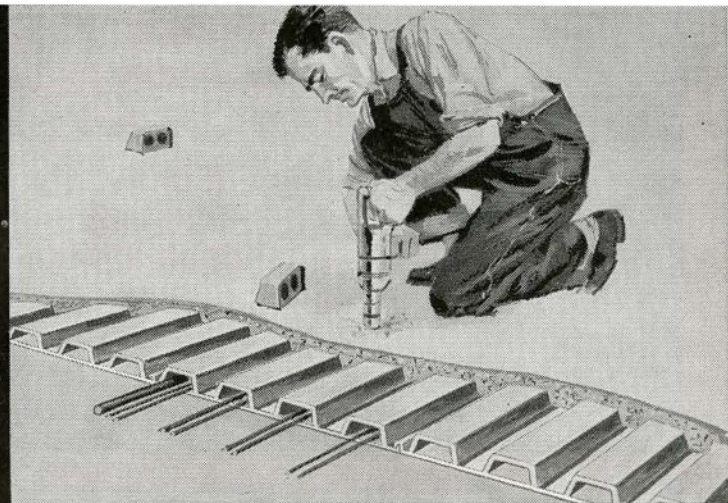
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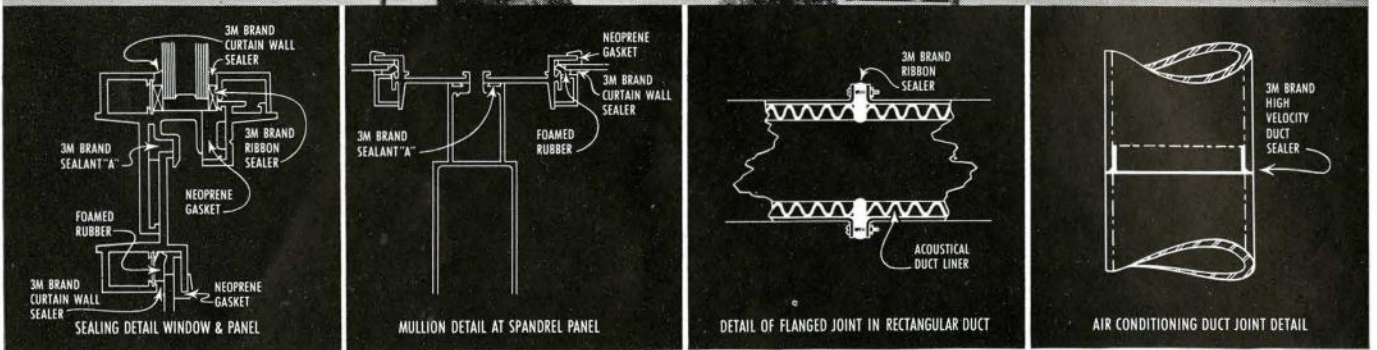
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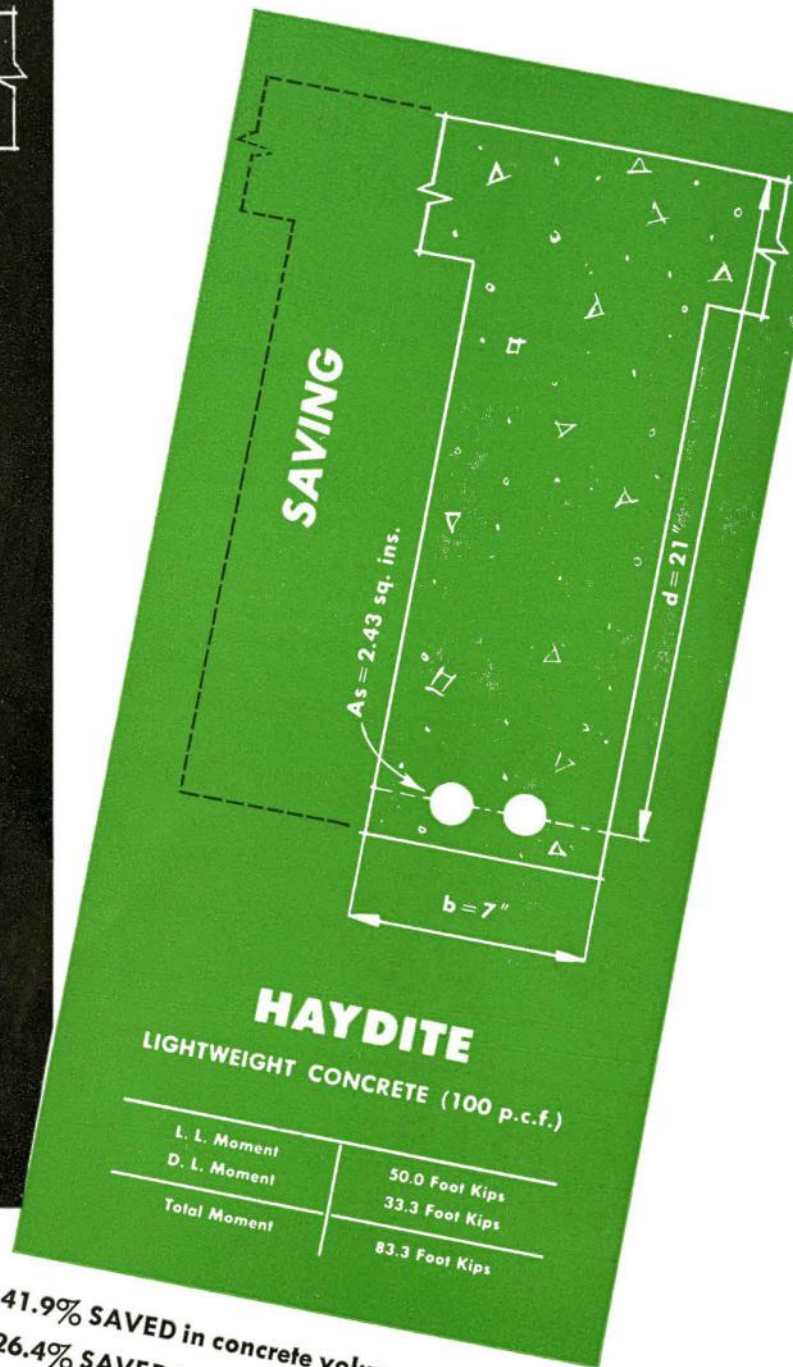
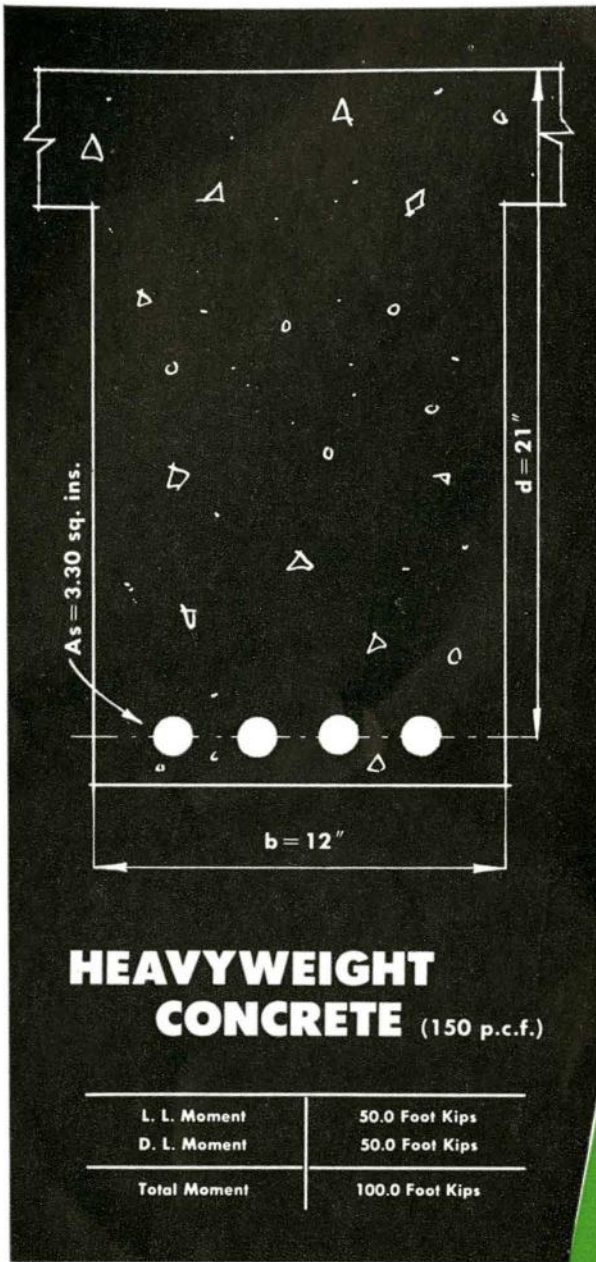
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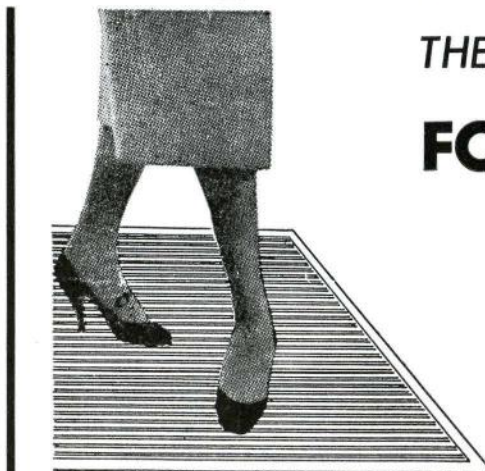
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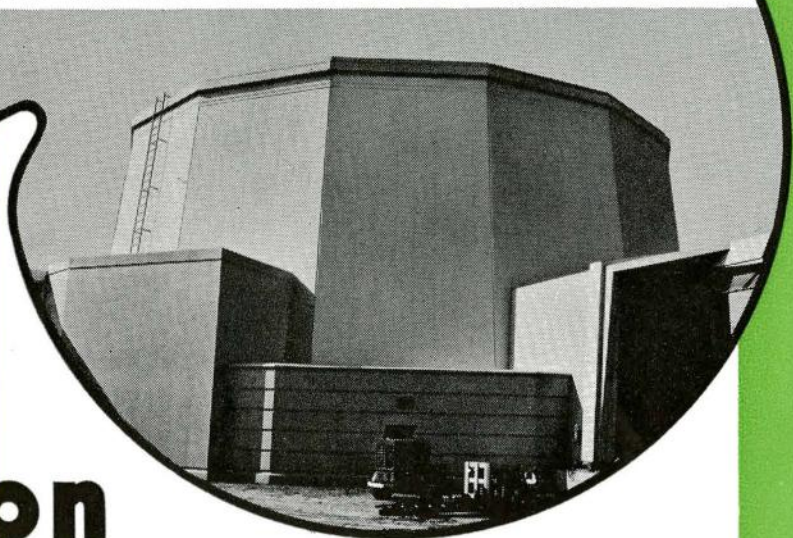
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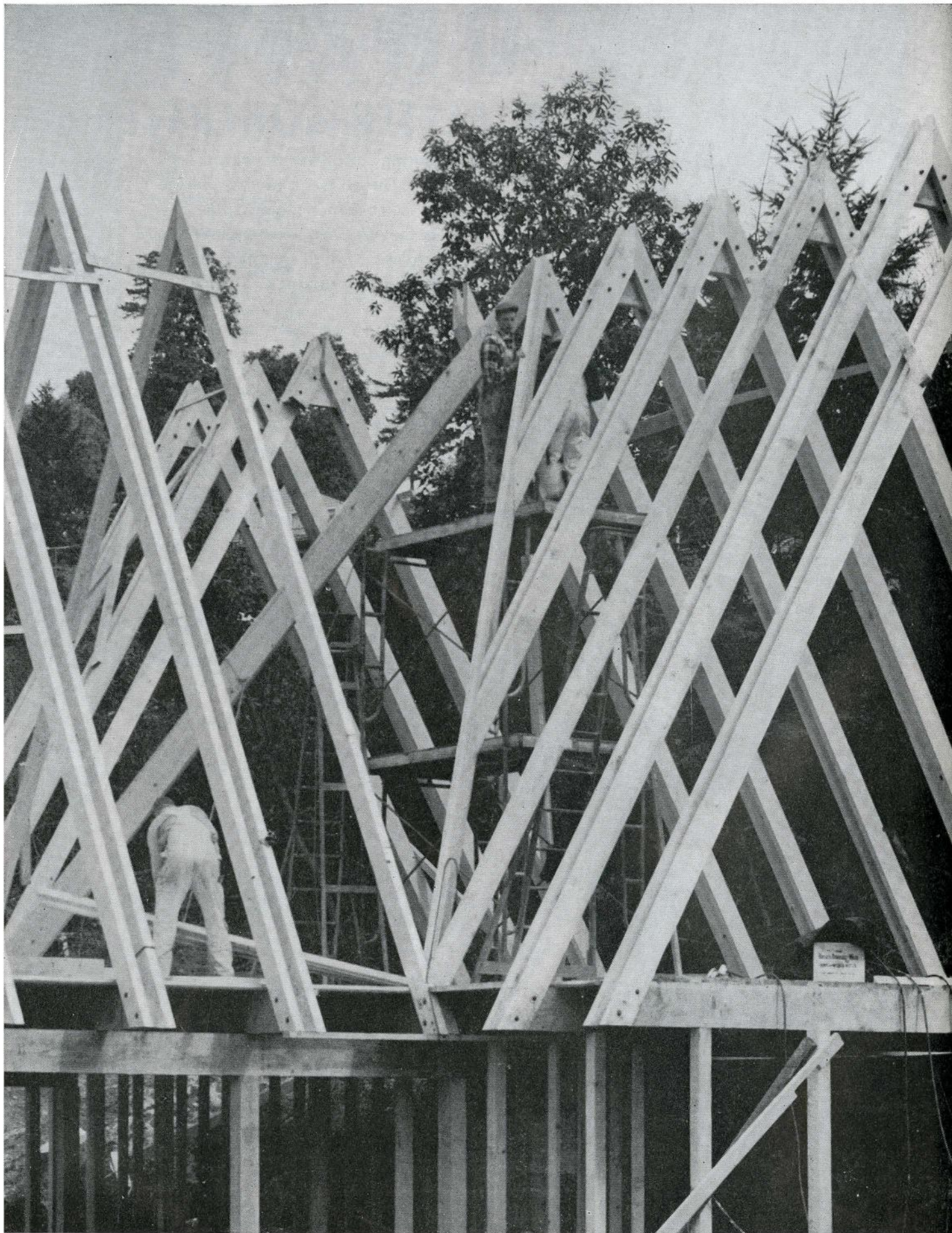
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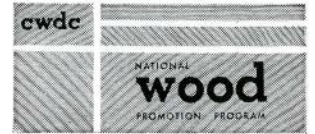
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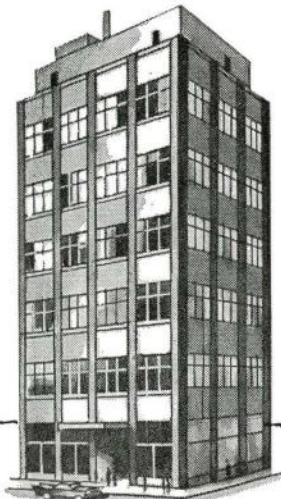
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INDEX TO JOURNAL ADVERTISERS

	Page
Algoma Steel Corporation, Limited, The	13
Allied Chemical Canada, Ltd.	21
Anaconda American Brass Limited	83
Armstrong Cork Canada Limited	15
Atlas Steels Limited	99
Babcock-Wilcox and Goldie-McCulloch Limited	81
Bolar Foot Grill Co. Ltd.	94
Canada Brick	27
Canada Cement Company, Limited	22-23
Canadian Armature Works Inc.	86
Canadian Crittall Metal Window Ltd.	98
Canadian Gypsum Company, Ltd.	12
Canadian Industries Limited, Plastics Division	82
Canadian Library Service, Division of Canadian Library Supply Company Limited	94
Canadian Wood Development Council	96-97
Coal Tar Products Division, Dominion Tar & Chemical Company Limited	18
Connor Lumber and Land Co.	77
Cooksville-Laprairie Brick Limited	93
Corbin Lock Division, International Hardware Company of Canada Limited	29
Dominion Bridge Company Limited	30-31
Dominion Foundries and Steel, Limited	90-91
Duplicate Canada Limited	14
Dur-O-wal Ltd.	Second Cover
Holophane Company Ltd., The	3
Inland Cement Company Limited	100
Johnson, H. & R., (Canada) Limited	76
Kawneer Company Canada Ltd.	11
Laidlaw, R., Lumber Company Limited	88
Medicine Hat Brick and Tile Co. Ltd.	85
Medusa Products Company of Canada Ltd.	91
Miller, Herman, Inc.	25
Minnesota Mining and Manufacturing of Canada Limited	92
Natco Clay Products Limited	Third Cover
Northern Electric Company Limited	28-32
Ontario Hydro	24
Otis Elevator Company Limited	16-17
Para Paints Limited	94
Pedlar People Ltd., The	26-80
Pilkington's Tiles Limited	5
Plywood Manufacturers Association of B.C.	78-79
Ready Mixed Concrete Association of Ontario, The	77
Rolscreen Company	10
Royal Metal Manufacturing Co. Ltd.	4
Russell, The F. C., Company of Canada Limited	Back Cover
Sand Lime Products Institute	87
Siporex Limited	89
Smith Manufacturing Limited	76
Steel Company of Canada Limited, The	6
Sterne, G. F., and Sons Ltd.	95
St. Mary's Cement Co. Limited	9
Taylor Woodrow (Canada) Limited	90
Toronto Cast Stone Company Limited	74-75
Vapor Heating (Canada) Limited	84
White, D. A., & Co. Limited	76
Wilson & Cousins Co. Limited	7-8
Wood, G. H., & Company Limited	19-20

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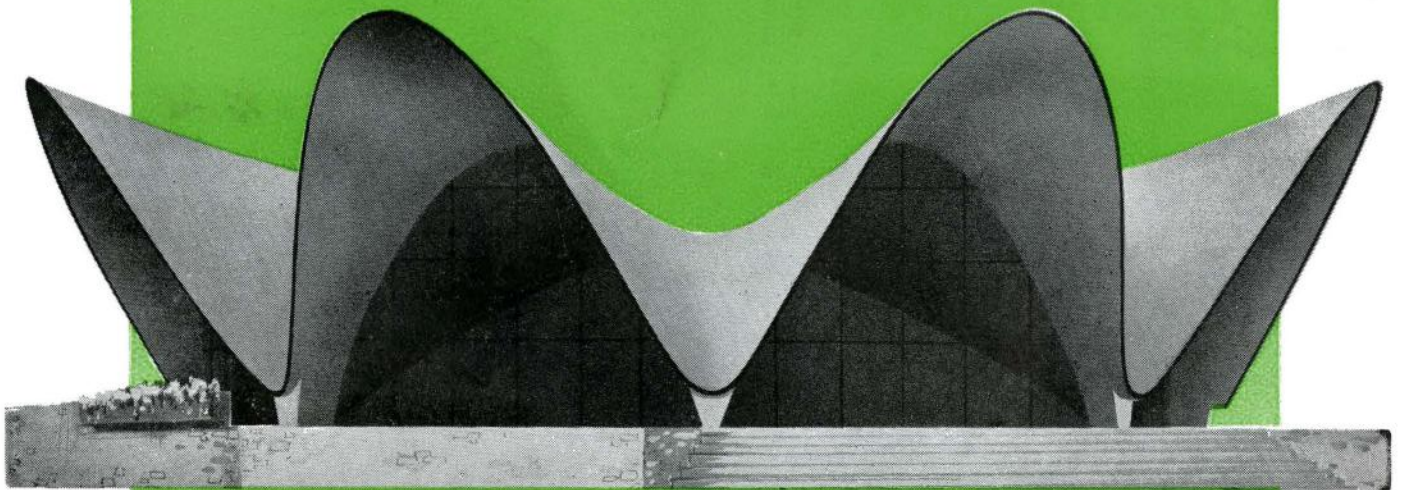
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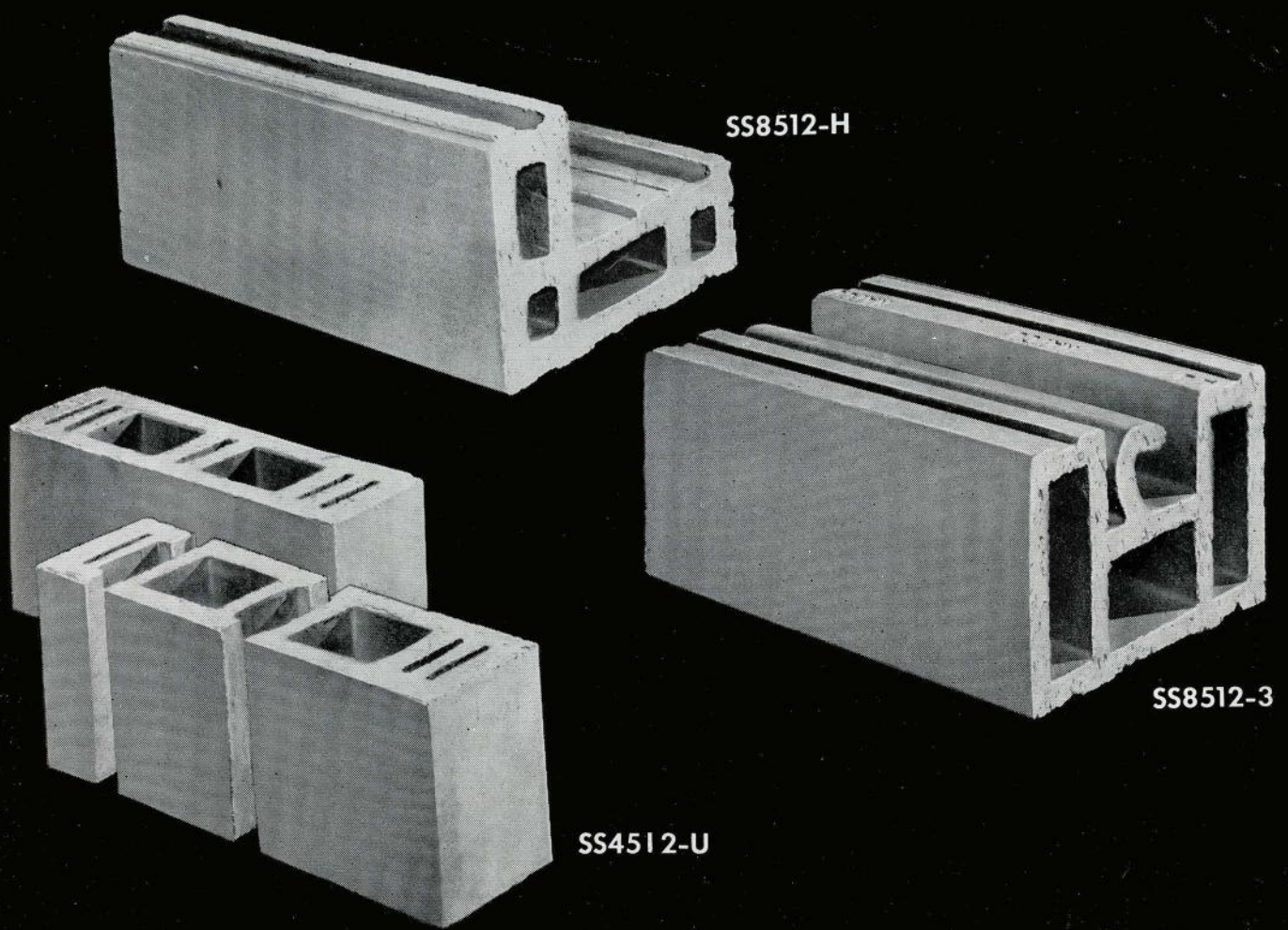
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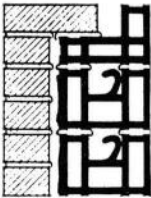
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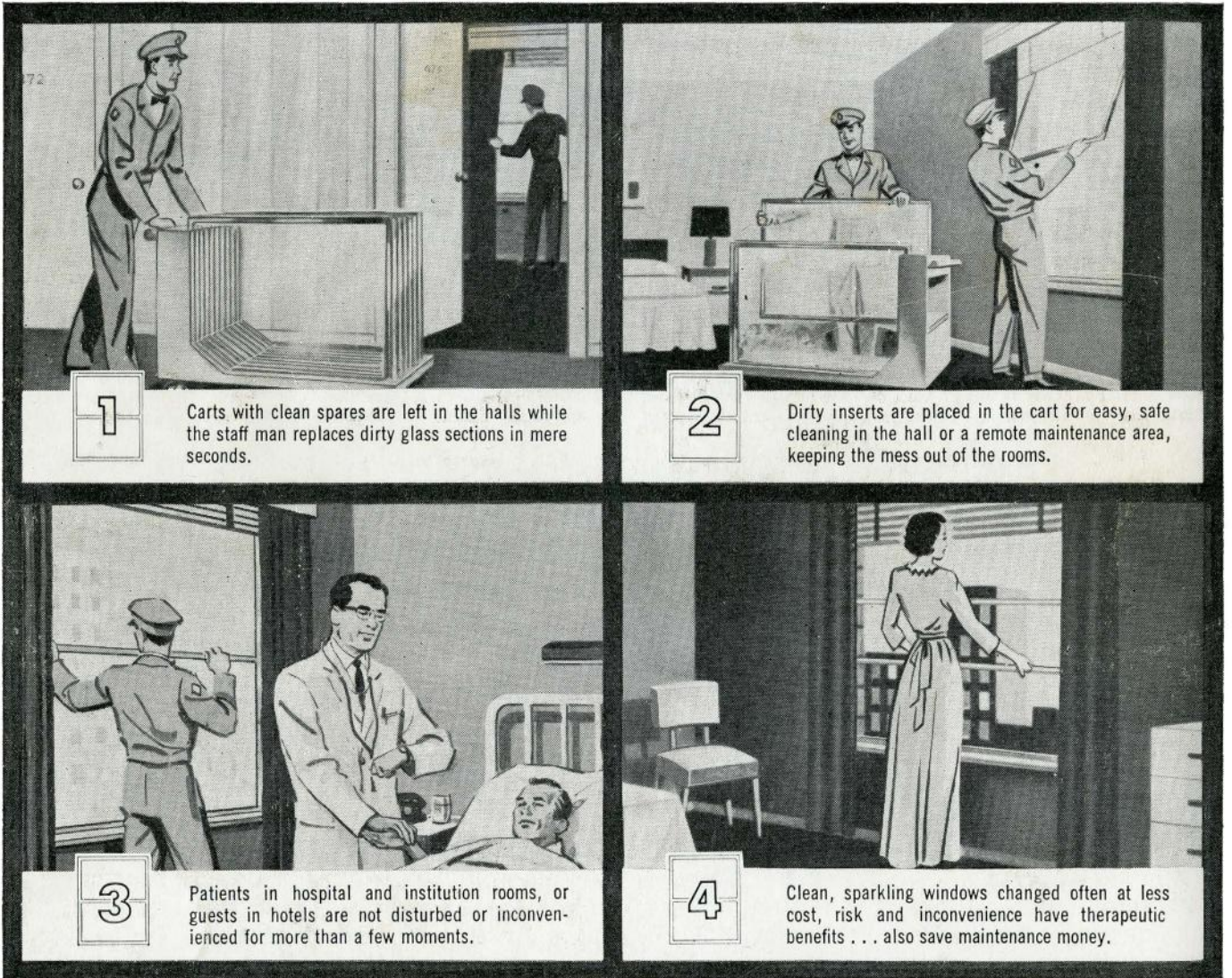
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