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This report makes an analysis, and comments on the physical or architectural characteristics of the information gained during the preparation of the following Research Study:-

"THE USE OF SPACE IN PUBLIC HOUSING:
a study of three projects in Ottawa"

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Ottawa

Commissioned by: Central Mortgage and Housing Corporation

This report prepared by:
the Architectural and Planning Division
Central Mortgage and Housing Corporation

David Crinion, Chief Architect

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INTRODUCTION

In March 1968, Central Mortgage and Housing Corporation commissioned the Sociology Department of Carleton University to undertake a research study on the use of interior living space in Public Housing, to be prepared under the direct supervision of Dean Victor Valentine. Three housing projects in Ottawa were selected for study and it was decided that approximately 65 households, distributed more or less evenly between the projects, would be chosen. The final choice of households within each project was made on a random basis of selection.

At the time of writing, the Research Study has not yet been published; however, a first draft and the detailed information obtained during the interviews have been made available to the Architectural and Planning Division of C.M.H.C. in order that a separate analysis of the physical or architectural component of the Study may be made. It must be emphasised that this Research Study should be classed as a pilot one since there is little if any material of a comparable nature available in Canada today. Because of the lack of precedents, the C.M.H.C. architects who were originally consulted by Dean Valentine and his research staff were only able to state in very broad terms the type of information required and how it might be used. In detail this led, insofar as the architectural aspect was concerned, to general kind of interviews and it is clear that greater consideration must be given to the selection of interviewing techniques to elicit the information required on a more objective and precise basis.

For the foregoing reason the analysis of the information gained cannot be on as scientific a basis as may be wished. This of course does not mean that the material obtained in the interviews is not of great use, but caution must be exercised in using the conclusions because judgement has had to be used in compiling the

results. Further, the true value will only emerge when the information contained in this present study is added to those that should be done in other regions of the Country. Two other unknown factors are firstly, the performance of these houses in other climatic conditions; and secondly, whether the results are indicative of patterns of behaviour because the family is in this social group or whether the same patterns exist in other social groupings living in a similar environment. It is hoped that many studies on all these vital topics will be commissioned in the future to increase and broaden knowledge on a national basis.

GENERAL INFORMATION

The three projects selected for study were BLAIR COURT, ROCHESTER HEIGHTS and PINECREST TERRACE.

BLAIR COURT is located in the Alta Vista area of Ottawa and was constructed in 1964; it consists of 75 units, has an overall density of 13 units per acre and is a mixture of row and back to back housing with basements.

ROCHESTER HEIGHTS is located in the Preston Street area of Ottawa and was constructed in 1966; it consists of 111 units, has an overall density of 20 units, and contains mainly rowhouse basement-less accommodation.

PINECREST TERRACE is located in the West End of Ottawa and was constructed in 1960; it consists of 124 units, has an overall density of 12.4 units and contains mainly rowhousing with basements and a few low-rise apartment units and maisonettes.

From the physical standpoint the study obtained information on the following aspects:

1. Criticisms of the individual house by the tenant. This was done by in-depth interviews.
2. An Equipment and Appliance Survey. This was done by means of a printed check list filled in by the tenant. This form also included information on the means by which the item was acquired, i.e. whether it was bought by the tenant or was a gift. This Survey helps to establish the amount of possessions and the space or storage that need be provided for them.

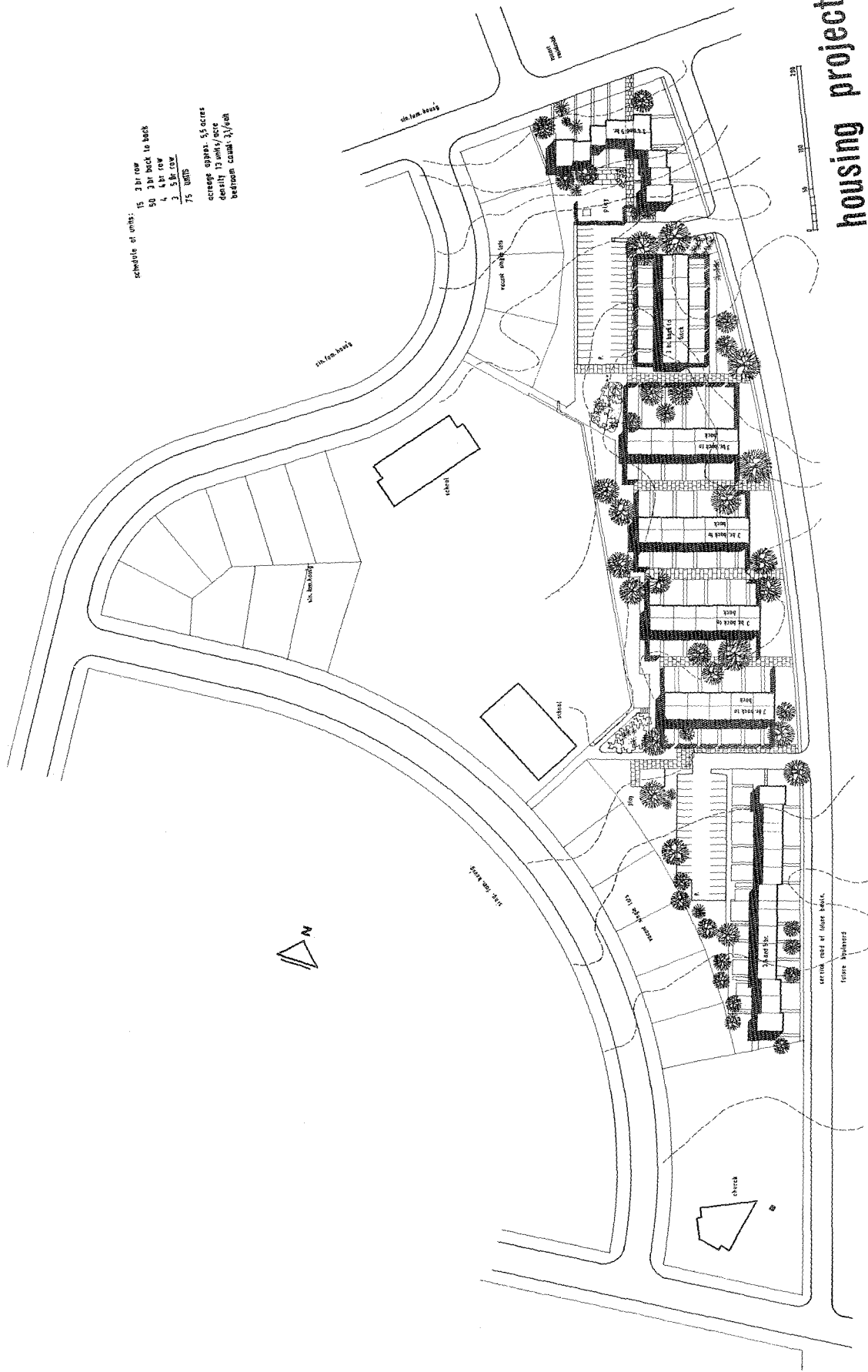
3. A Furniture Survey. This was done by the tenant drawing on plans provided, the location of all furniture in the house.
4. Some general information was given in the interviews on the tenants opinions regarding his reaction to his immediate external environment.

One item not covered concerned the incidence of car ownership; however, this was not part of the terms of reference. In future studies of this nature, it is of paramount importance that this subject be fully covered.

The number of respondents for each category was as follows:

	<u>Blair Court</u>	<u>Rochester Heights</u>	<u>Pinecrest Terrace</u>	<u>Total</u>
Interviews	19	23	23	65
Furniture plans	17	24	23	64
Equipment, etc.	13	24	20	57

The term "Residential Standards" is used in the text; this means the Residential Standards, Supplement No. 5 to the National Building Code of Canada. These Standards cover the basic criteria for House and Apartment design as well as governing the minimum standards for construction. It should be noted that these regulations are changed over the years as evidence for amendment is made available; therefore the criteria for the design of a project in 1960 will not necessarily be the same as for 1966 or 1970; it is hoped that it will be better.



schedule of units:
 15 2 br row
 50 3 br back to back
 4 4 br row
 3 5 br row
 75 units
 acreage approx. 5.5 acres
 density 13 units/acre
 bedroom count 211/600

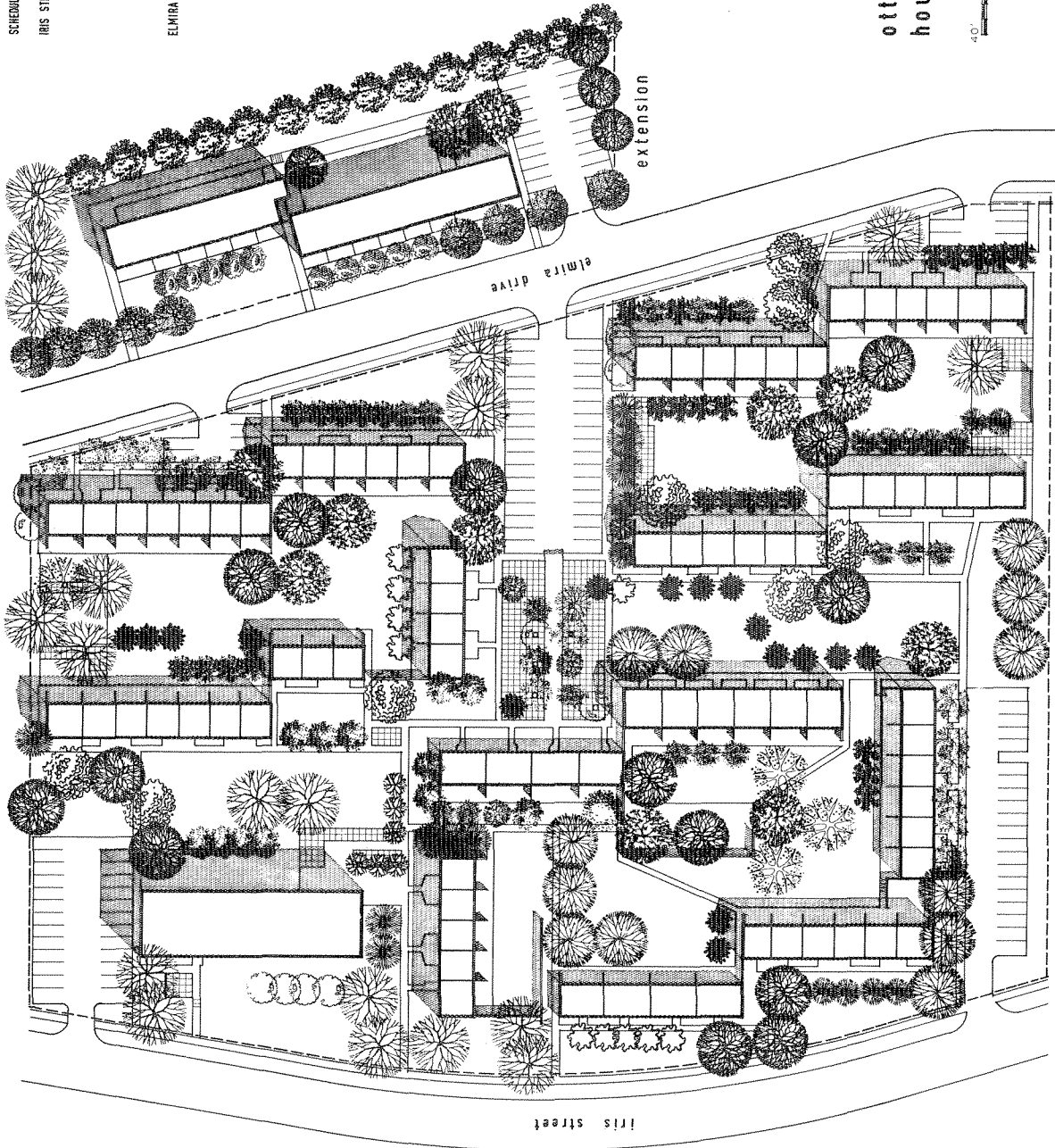
housing project layout

SITE CODE: 1

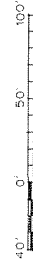
BLAIR COURT

SCHEDULE OF UNITS

8	2-Bedroom Row	R2-2B.
54	3-Bedroom Row	R3-11A.
14	4-Bedroom Row	R4-7A.
6	5-Bedroom Row	R5-1A.
21	2-Bedroom Aptmt.	A2.
Site Area: 89 acres.		
Density: 11.5		
ELMIRA DRIVE EXT.		
21	3-Bed Masonettes	M3-1B.
Site Area: 11 acres.		
Density: 19.		



ottawa f.p.2
housing project



PINECREST TERRACE

SITE CODE: 3

INTERVIEWS

The criticisms of the projects which are now given have been extracted from the individual in-depth interviews. Criticisms which apply generally are set out first followed by the criticisms applying only to specific house types.

HOUSE TYPES STUDIED: 14

<u>Project</u>	<u>House Type</u>	<u>Total</u>
Blair Court	R2-33	2
	R3-33	11
	R3-32/1 & 2	3
	R4-20D	<u>3</u>
		19
Rochester Heights	R3-42A	19
	R4-26A	1
	R4-27B	2
	R5-10A	<u>1</u>
		23
Pinecrest Terrace	A-2	2
	M3-1B/A	1
	M3-1B/M	2
	R3-11A	12
	R4-7A	3
	R5-1A	<u>3</u>
		23
<hr/>		
Totals	14	65

CRITICISM APPLYING TO ALL HOUSE TYPES

The item is given first followed by the number of respondents, or tenants, interviewed: "Respondents". After this is given the number of respondents making the criticism: "Number", and then the percentage of the total tenants interviewed making criticism: "Percentage".

<u>Criticism</u>	<u>Respondents</u>	<u>Number</u>	<u>Percentage</u>
Dining-Kitchen has varied use.	65	44	66%
Lack of closet doors.	65	24	36%
Would like shelves basement.	37	5	14%
Lack of broom closet.	39	23	58%
Lack of shower.	65	31	47%
Lack of Heating control.	35	13	36%
Lack of Kitchen cupboard doors.	23	20	86%
Would like basement.	23	17	72%

Note: The change in the numbers of respondents is because the possibility of comment only applied to that number of houses; e.g. there were only 23 houses without basements whereas 65 lacked showers.

COMMENT

Dining-Kitchen has varied use - 66%

Though only 66% record the fact, it is clear from the interviews that the great majority of tenants prefer the Dining-Kitchen relationship and use the room for a far greater variety of activities than simply eating. Cooking, ironing, entertaining, homework, playing games, writing,

sewing indicate the range of uses. There is clear evidence in the interviews that respondents wished that the room be larger. Providing the table will seat the occupants of the house plus having adequate circulation space it is difficult to see how much larger this room can be made, bearing in mind the meagre information now available and the discipline of costs for Public Housing. It may be that if a choice for space has to be made, there should be a greater leaning towards the needs of the Dining-Kitchen than the Living Room. This subject is referred to later in "Furniture Survey".

Lack of closet doors - 36%

At the time of the construction of these projects, doors to the clothes closets were omitted for reasons of economy. Due to complaints from a number of sources, of dust and dirt accumulating on clothes, doors are being provided in future Public Housing.

Would like some shelves in the basement - 14%

The cost of providing this amenity is minimal in the original price of the housing considering the ultimate advantage to the tenant. It is evident from the Furniture Plans that most of the miscellaneous small items such as detergents, paint, bottles, etc. end up on the floor. In the case of these projects, tenants are not allowed to build in shelves.

Lack of broom closet - 58%

Though this amenity is not required by the Residential Standards, its omission is seriously felt. Reference is made on this subject in the comments on the Equipment and Appliance Survey and the necessity to provide a Broom Closet to accommodate all household cleaning equipment.

Lack of shower - 47%

For reasons of economy, showers have not to date generally been provided in Public Housing. An attempt is being made to provide them in the future.

Lack of heating control - 36%

This comment came from respondents living in units where the heating was provided from a communal source. The criticism is a perennial one where installation of this kind is made. The cause of variation in temperatures is primarily due to the lack of sophistication of heating control equipment which is expensive. It is essential that adequate controls be provided and this should be taken into greater account when assessing the relative cost of combined heating as compared with individual heating units.

Lack of Kitchen cabinet doors - 86%

This criticism only applies to Pinecrest Terrace which was built in 1960. Both Blair Court and Rochester Heights have them, as do subsequent Public Housing.

Would like basement - 72%

This criticism only applies to Rochester Heights where ground conditions required their omission. The point made by this criticism is that respondents did not consider the laundry and storage areas, provided in lieu of the basement and complying with Residential Standards, adequate in approaching the amenity provided by a basement.

GENERAL COMMENT

Furnishing

It is apparent that rooms of exaggerated shape and difficult circulation patterns cause difficulties of furnishing to the tenants. Rooms must be designed to take a straightforward and simple layout of furniture.

Medicine cabinets

Many respondents mentioned that they used the cupboard over the refrigerator in which to store medicine simply because it is safe and difficult for children to get into. Presumably the keeping of medicine in the "medicine" cabinet provided in the bathroom has long gone in favour of deodorants, depilatories, and dandruff preventers. The whole subject of the safe storage of medicine and toilet necessities requires more information which should be obtained in later user studies.

Curtains

Some respondents mentioned that the windows were costly to curtain. Whilst it is difficult to draw a conclusion from these few comments, it must be borne in mind that providing curtains is an important first cost to the tenant, consequently unnecessarily large areas of glazing should be avoided.

Linen Closets

The Residential Standards set down the size that linen closets should be. There are some complaints in the four bedroom houses that the size is too small. The sliding scale in Standards should be examined to recheck its adequacy for the larger houses.

CRITICISM APPLYING TO ALL CONSTRUCTION

Apart from a number of detailed comments on poor construction, there were some which were fairly common to all.

Windows and Doors leak

Over 50% of the respondents surveyed complained of leaking windows and the occurrence was actually witnessed by some of the researchers. Since these projects were constructed, better quality windows are now being used in Public Housing which should overcome possible future complaints. Insofar as doors are concerned there is a continual search being made for better quality economical doors which do not warp.

Paint coming off walls

Whatever the cause of this problem in the houses studied, the procedure now in Public Housing is to make a greater use of semi-gloss and gloss paints which give a greater resistance to wear in areas that this may be expected.

Bathroom equipment coming off walls

The only comment to be made on this item is that now, wash hand basins at least are provided with legs or a pedestal to prevent them being pulled off the walls when children swing, stand or exercise on them.

Soundproofing between units

The construction of the party walls provide a 48 Sound Transmission Coefficient rating in all three projects; this complies with Residential Standards. Now party walls are being constructed with a higher STC rating of at least 50. This subject of sound transmission requires further study to determine more acceptable ratings.

Since the standard of construction for Public Housing is governed by the Residential Standards which are the same regulations governing private housing built under the N.H.A., it would seem that many of the criticisms are in reality items that should be covered by a good maintenance programme of the Housing Authority.

CRITICISM APPLYING TO ALL SITE DESIGNS

As mentioned before, study of the site was not part of the terms of reference for the study; however, some information was obtained on what may be assumed as being the greatest areas of contention, if only because it was dominant enough in the minds of the respondents to warrant mention.

By far, the greatest complaint was against the lack of external privacy. Obviously there are many reasons of a sociological nature that help to build up this kind of resentment but there are two aspects concerning site design that do not help the situation. The first is the fact that there is little actual privacy provided by the few walls or screens that have been built. And second, the low rails, provided as a means of demarcation of property, are inadequate for the private control of the movement of children and adults. This lack of control over their immediate external environment is hardly helped by the fact that the Housing Authority will not in most cases permit the tenants to provide fences themselves. The cost of providing adequate site works has always been a problem; invariably, when money has to be saved on a project the site works bear the first brunt of the axe, with the same future criticisms being made as in these interviews. It does not yet seem to be realized that, as known in Europe, the higher the density, the absolute necessity to provide correct and adequate site works.

A very significant point emerging from the interviews was over the tenants' assessment of preferences for housing within each project. Irrespective of what the overall density of development may be, there are marked differences of desirability for parts of the project in which to live; this is distinct from preferences because of personal relationships. The end of a row of houses is preferred to the middle; the back to back houses that face an open area are preferred to those facing other back to back houses, and so on. Basically this idea is not new but the important aspect is that the density of development of a project, as it affects the individual, varies constantly throughout a project regardless of calculated overall densities. Not always did the respondents indicate a preference only for lower density areas but the wish was coupled with the idea of having their own private corner to themselves. No doubt an atavistic need for territory?

Play areas come in for much criticism, either inadequate in equipment, insufficient in number, or poorly supervised. Great objection was made to "monkey bars", euphemistically a Jungle Gym; children had fallen and been hurt. Sandboxes were disliked because of pollution of the sand by cats, dogs and children.

CRITICISM APPLYING TO INDIVIDUAL HOUSE TYPES

The item is given, then the number of tenants making the comment, and lastly, the percentage which the number represents of the total.

House Type R3-33 and R2-33

Back to Back House

Blair Court

Respondents: 13

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Concern over single exit -- fire.	4	31%
Lack of cross ventilation.	5	39%

Lack of screen door.	5	39%
Entrance coat cupboard in poor location.	8	62%
Linen cupboard in poor location.	5	39%
Windows expensive to curtain.	4	31%
Kitchen cabinets too high.	2	15%

Lack of cross ventilation.

This can be a problem with the back to back house form if the design does not allow for natural cross ventilation. The lack of a screen door compounds the problem because only via the front door can an airflow be induced in the center of the house. With no screen door and the front door open, flies and bugs have a field day.

Entrance coat cupboard in poor location.

Some kind of criticism of this was made by all respondents living in this house type. In this instance the cupboard was half a flight removed from the front door; shoes, etc. were nevertheless all left on the half landing creating a traffic hazard, particularly because of the close proximity of the stairs.

Linen cupboard in poor location.

This house type has three levels of accommodation, with a bedroom and half bathroom in the basement; the linen cupboard is on the middle floor. Apparently the respondents wished the linen cupboard to be located on the main bedroom floor.

Kitchen cabinets too high.

This refers to the height of the upper cabinets above the work surface. In this case they are 1'-8" above the work surface; the nationally accepted average height is 1'-4".

House Type R4-20D

Blair Court

Rowhouse

Respondents: 3

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Kitchen cabinets too high.	2	66%
Likes and uses balcony.	1	33%
Dining area too small.	2	66%
Chimney protrudes into Living Room.	1	33%
Linen cupboard too small.	1	33%

House Type R3-32/1 and 2

Blair Court

Rowhouse

Respondents: 3

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Kitchen cabinets too high.	3	100%

Kitchen cabinets too high.

This refers to the height of the upper cabinets above the work surface. In this case they are 2'-6" above the work surface; the nationally accepted average is 1'-4". This is an error in design.

House Type R3-42A

Rochester Heights

Rowhouse

Respondents: 19

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Windows expensive to curtain.	3	16%
Master bedroom too small.	3	16%

House Type R4-26A

Rochester Heights

Rowhouse

Respondents: 1

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Kitchen too small for dining.	1	100%
Would like Dining Room.	1	100%

House Type R4-27B

Rochester Heights

Rowhouse

Respondents: 2

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Bedrooms too small.	1	50%
Windows expensive to curtain.	1	50%
Would prefer Dining Room.	1	50%

House Type R3-11A

Pinecrest Terrace

Rowhouse

Respondents: 12

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
No space in Bedroom for study.	5	42%
Kitchen too small for dining.	12	100%
Would like study room.	4	33%
Living Room poor shape for furnishing.	8	66%
Conflict between front and rear doors.	7	58%
Range location -- drapes fire.	5	42%
Too many doors in small hall.	2	17%

Conflict between front and rear doors.

In reality this is a problem of site design. The original

concept was for the exterior door in the Living Room to act simply as a door to a patio. Because of the way the house has been sited, access is just as convenient via this Living Room door, making the Living Room a hallway. Future site designs should not reproduce this problem.

Range location -- drapes fire.

When the range is located near a window where the curtains could blow across the range elements, a very serious fire hazard is caused. Such a situation is not now allowed.

House Type R4-7A

Rowhouse

Pinecrest Terrace

Respondents: 3

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Range location -- drapes fire.	1	33%
Would like study room.	1	33%
Living Room bad shape for furnishing.	1	33%
Conflict between front and rear doors.	2	66%
Bedrooms too small.	1	33%

House Type R5-1A

Rowhouse

Pinecrest Terrace

Respondents: 2

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Kitchen too small for dining.	1	50%
Living Room poor shape for furnishing.	2	100%
Conflict between front and rear doors.	1	50%

House Type M3-1B/M

Pinecrest Terrace

Maisonette

Respondents: 2

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Conflict between rear and front doors.	2	100%
Kitchen too small for dining.	2	100%
Bedrooms too small.	1	50%
Would like study room.	1	50%

House Type A-2

Pinecrest Terrace

Apartment

Respondents: 2

<u>Criticism</u>	<u>Number Commenting</u>	<u>Percentage</u>
Hallways hot and smell.	2	100%
Lack of privacy for individuals in apartment.	1	50%
Dislikes combination room.	2	100%
Likes balcony.	2	100%
Kitchen too small.	1	50%
Living Room too small.	1	50%

EQUIPMENT AND APPLIANCE SURVEY

The items listed below have been extracted from the detailed Equipment and Appliance Survey. Selection has been made on the basis that the item could present a problem to the tenant in locating it or finding storage room. The complete list of equipment from which information was obtained is attached.

RESPONDENTS: 57

<u>Item owned</u>	<u>Percentage owning item</u>
Freezer	19%
Ironing Board	93%
T.V.	98%
Stereo Hi-Fi	35%
Washing Machine	97%
Dryer	16%
Vacuum Cleaner	60%
Floor Polisher	56%
Bicycle	67%
Lawnmower	49%
Baby Carriage	21%

COMMENTS

The Survey contains information regarding the method of acquisition of each item. It is significant that such a proportion were gifts; the interviews mention donors being either social organizations or friends and relations. It cannot therefore, be assumed that because people are poor they automatically own less; the quality or state of repair of these possessions may or may not be particularly high but space is nevertheless needed for them. Quite obviously the filtering down process is occurring just as with housing and cars.

Freezer - 19%

Presumably the advantage of buying in bulk has resulted in the relatively high proportion of ownership of this item. It is of interest that only one was owned in Rochester Heights, a basementless project, whereas 5 each were owned in Blair Court and Pinecrest Terrace, both projects having basements. The one owned in Rochester Heights was kept in the Kitchen.

Ironing Board - 93%

The storage of the ironing board depends upon where the ironing is done; this is well shown by a study of the furniture layouts and interviews, ironing being done either in the basement or on the main floor. When the board is required to be stored on the main floor, a problem occurs when a broom closet is either too small or not provided.

Television Set - 98%

From the percentage of sets owned we may assume that television is probably here to stay and is unlikely to go away. Provision must be made for it.

Stereo Hi-Fi - 35%

Although only 35% of the respondents signified that they owned a stereo set, a larger number, 61% did own a record player.

Washing Machine - 97% Dryer - 16%

To all intent and purposes, everyone owns a washing machine. Mainly they are second hand wringer models which need rolling to the tub; they are most suited to the basement. No doubt dryers too will soon begin to filter down.

Vacuum Cleaner - 60% Floor Polisher - 56%

The surprising statistic here is the high proportion of Floor

Polishers owned compared to the number of Vacuum Cleaners.

Bicycle - 67%

There is a continuous refrain in the interviews, of having to chain bicycles to the house each night, or carry them down to the basement. The statistic shown does not give the complete story because in many cases more than one bicycle is owned; further, the number of tricycles or children's carts are not given here, but the problem of storage is theirs also.

Lawnmower - 49%

The storage of this item presents a problem to the respondents.

Baby Carriage - 21%

None of the houses surveyed provided a separate space for the storage of a baby carriage. Some respondents showed them in the Furniture Survey as being located in the basement whereas others ignored them altogether, presumably because they are a moveable item. A point which emerged is that a baby carriage (and high chair) only appeared as a possession when the family actually needed it, i.e. when there was a child of approximately 3 months to 2 years of age. After this the carriage is apparently disposed of; certainly those families not needing one do not show a carriage as being owned. A reasonable conclusion is that there is an extensive loan programme in existence and the necessary equipment is acquired only as the need arises. It is not in fact a permanent possession.

COMMENTS

Freezer

The proportion owned does not warrant special consideration

at the moment. The rate of ownership and size of freezers however, should be carefully watched to see if any problems occur in the future with regard to storage. This latter point is of particular importance in basementless houses or in houses where basement space is of the minimum. It would also be of interest to know what apartment dwellers think of freezers; if the ownership rate is low, is this simply because of the problem of storage? A further point on which information is required is whether the incidence of ownership is significantly different in the low income groups compared to higher incomes because of possible economies in food buying.

Ironing Board - Vacuum Cleaner - Floor Polisher

All these require storing and the obvious place is in a Broom Closet with other household items of this nature. Residential Standards do not require that a Broom Closet be provided. Notwithstanding this, studies should be made of their detailed design and such closets provided in future.

T.V. - Stereo

No special provision is needed for these items other than recognizing that they do exist and consideration needs to be given to them when designing the electrical layout. Generally this equipment was used in the Living Room; however, in many cases a record player was located either in bedrooms or the basement.

Washing Machine - Dryer

In the design of the laundry area provision should now be made for both types of equipment. Now, the washing machine has virtually universal ownership and it can be assumed that the dryer too will soon become as ubiquitous.

Bicycle - Lawnmower

Invariably the provision for storage of these items is ignored. But they don't go away. Coupled with children's tricycles etc., a very strong case can be made for providing simple and economical external storage. Provision of a basement does not solve this problem and it becomes far more acute in a basementless house. A study should be made of the possibilities for providing outside stores.

Baby Carriage

The cost of providing separate space to accommodate the baby carriage during the day is extremely high. If the baby stays at the main floor level during the day, and in most cases it does, then the potential of storage in a basement is useless as the carriage simply will not be carried up and down daily. More information should be acquired on this subject.

EQUIPMENT AND APPLIANCE SURVEY

Number of respondents: 57

<u>Item</u>	<u>Total owned</u>	<u>Percentage</u>	<u>How acquired</u>	
			<u>Bought</u>	<u>Gift</u>
Refrigerator	53	93%	94%	6%
Stove	53	93%	89%	11%
Freezer	11	19%	100%	---
Electric toaster	46	81%	65%	35%
Electric frypan	29	51%	41%	59%
Electric mixer	28	49%	61%	39%
Electric blender	7	18%	43%	59%
Electric percolator	13	23%	46%	54%
High chair	19	33%	63%	37%
Ironing board	53	93%	83%	17%
Garbage can (inside)	22	39%	73%	27%
Electric kettle	39	68%	59%	41%
T.V.	56	98%	93%	7%
Radio	50	88%	80%	20%
Stereo (Hi-Fi)	20	35%	100%	---
Record player	35	61%	77%	23%
Bookcase	17	30%	59%	41%
Piano	1	2%	100%	---
Automatic washing machine	15	26%	80%	20%
Wringer washing machine	39	68%	92%	8%
Automatic dryer	9	16%	89%	11%
Vacuum cleaner	34	60%	79%	21%

<u>Item</u>	<u>Total owned</u>	<u>Percentage</u>	<u>How acquired</u>	
			<u>Bought</u>	<u>Gift</u>
Electric sewing machine	28	49%	79%	21%
Floor polisher	32	56%	66%	34%
Hair dryer	24	42%	67%	33%
Bicycle	38	67%	87%	13%
Tricycle	23	40%	78%	22%
Motorcycle	1	2%	100%	---
Swimming pool	12	21%	92%	8%
Barbecue	20	35%	65%	35%
Lawn furniture	32	56%	84%	16%
Lawnmower	28	49%	71%	29%
Ice skates (pairs)	49	88%	88%	12%
Sled or toboggan	36	63%	78%	22%
Child's wagon	4	7%	75%	25%
Baby carriage	12	21%	75%	25%
Baby stroller	12	21%	58%	42%
Shovel	36	63%	92%	8%
Rake	33	58%	94%	6%
Mop	53	93%	98%	2%
Broom	54	95%	100%	---

Note: The number of Refrigerators and Stoves owned is 53 whereas the total respondents were 57. The apparent discrepancy is explained by the fact that 4 units were apartment accommodation and had the appliances supplied by the Housing Authority.

FURNITURE SURVEY

Out of 65 interviews, 64 respondents filled in plans of their homes showing the location of all furniture. Comment on this aspect of the Research Study requires a measure of judgement because it is not practical to reproduce all the floor plans. The use of this information is to gain an insight into what furniture the tenants of Public Housing own and to see if significant patterns of furnishing emerge which are at variance to those originally envisaged. There was no information on the size of furniture and in replotting the plans it has been necessary to assume average sizes. It is of interest to see that almost without exception, respondents drew in their furniture much smaller in scale than in reality.

The Dining-Kitchen

In the interviews there was much criticism of the size of the space provided for the dining table. In a number of cases the criticism was valid, but often the space was not used in the most economical way. In many instances the table was located in the center of the space with chairs on all four sides. Using the same furniture it was possible on plan to rearrange it to give a more convenient layout. In two or three cases tenants had gone to an extreme of moving the refrigerator from the Kitchen to the far side of the Dining space. No logical reason could be seen for this; however, either because of the door swing or size of the appliance, it must suit these people.

It has already been mentioned in the Interviews that the Dining-Kitchen is used for many different activities; it is almost certain that the criticism of size stems from this varied use and not whether the room is simply adequate for eating; the two are not synonymous. The subject requires far more data and study.

The Living Room

It is quite obvious that the determining factor in the furnishing of this room is the convenience provided for watching television. The floor areas on average appear to be adequate for their purpose. In most cases the four bedroom house has a slightly larger Living Room than the three. The validity of this provision is borne out by the fact that all four bedroom house Living Rooms contained slightly more seating space than the three. The four bedroom house does require a larger Living Room but only sufficient to take an extra chair or two.

Bedrooms

The bedroom floor plans stand out as being crammed with beds. Only in three instances out of 64 are bunk beds used. In some cases the rooms contain very little space for extra furniture and occasionally there is hardly room for the beds. This problem of inconsistency of size has stemmed from the fact that for many years the minimum floor areas established in the Residential Standards were used without too much study of their adequacy. This has changed in the last year or so and the subject of these sizes has received a good deal of study. It is hoped that in the not too distant future, by means of user studies similar to this Research Study, criteria will be established by specifying the amount of furniture each room should contain, rather than the arbitrary manner of using room floor areas.

Where excessive amounts of closet space were provided it was noticed that tenants filled the unused part with various pieces of furniture and boxes. This type of space is relatively expensive to provide and in the absence of criticism in the interviews, it would appear that the areas required in the Residential Standards for clothes closets are adequate.

The Basement

Although there is no evidence that basements are in any way finished by the tenants, there is ample evidence from the interviews and this furniture survey that basements are in fact used for many activities, particularly by the children. Consideration should be given to at least painting the walls and floors. Heating outlets should be adequate to keep this area at a similar temperature to the rest of the house throughout the year. Electrical outlets should be provided sufficient to enable T.V., record players, irons, freezers, tools, etc. to be used at different times.

Comment

Other than the conditions noted above there do not seem to be really different patterns of living that would indicate the necessity for a major change in approach to the planning of these houses. Perhaps the emphasis on the use of the Dining-Kitchen is one of the more important aspects to emerge from this Study. The question of where homework is done is mentioned in the interviews but is not noticeable as affecting the furnishing of the home. More information is needed on this important topic.

One reason for criticism of the size of accommodation may arise from the fact that this could well be the first time that the tenants have lived in houses of minimum sizes. Previous accommodation in which they lived may have been rat-infested or with leaking roofs but it was probably larger in size and built in an era when the economics of building were vastly different from today.

CHECK LIST

For convenience, aspects of the house that have been commented upon in the text of this report are listed below.

Dining-Kitchen	Electrical Layout
Kitchen Cupboards	Heating
Broom Closets	Basements
Living Rooms	Laundry
Curtains	Windows
Bedrooms	Exterior Doors
Clothes Closets	Screen Doors
Linen Cupboards	Cross Ventilation
Medicine Cabinets	External Privacy
Coat Closet	Fences
General Storage	Play Areas

ILLUSTRATION OF HOUSE TYPES

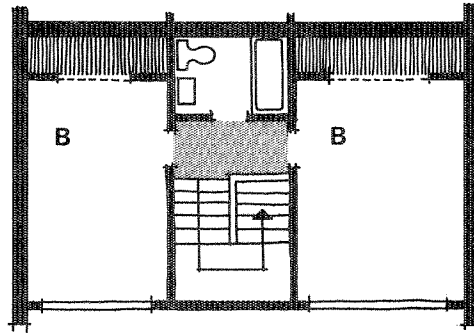
The following accommodation is illustrated:

<u>Project</u>	<u>House Type</u>	
Blair Court	R2-33	Back to Back
	R3-33	Back to Back
	R3-32/1 & 2	Rowhouse
	R4-20D	Rowhouse
Rochester Heights	R3-42A	Rowhouse
	R4-26A	Rowhouse
	R4-27B	Rowhouse
	R5-10A	Rowhouse
Pinecrest Terrace	A-2	Apartment
	M3-1B/A	Apartment
	M3-1B/M	Maisonette
	R3-11A	Rowhouse
	R4-7A	Rowhouse
	R5-1A	Rowhouse
Total:	<hr/> 14	

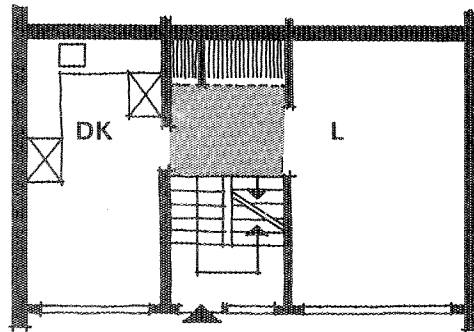
The following symbols are used on the plans:

L	- Living Room	LD	- Living-Dining
DK	- Dining-Kitchen	B	- Bedroom
D	- Dining Room	U	- Utility
K	- Kitchen	S	- Store

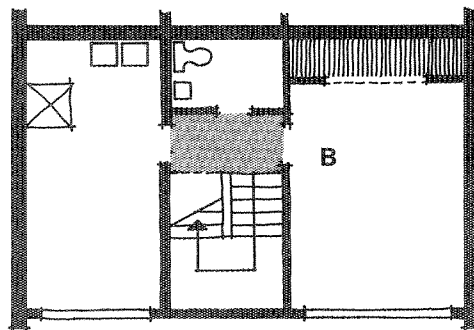
R3-33
Back to Back



second floor plan

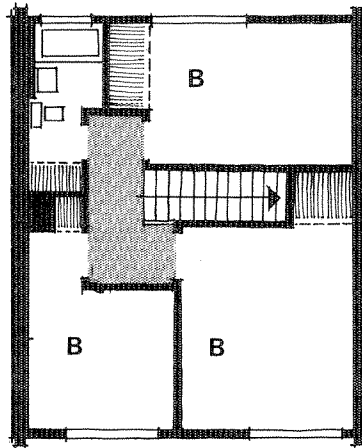


first floor plan

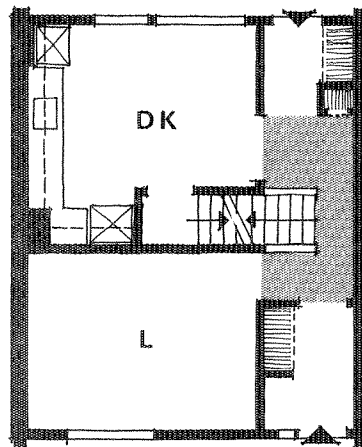


basement plan

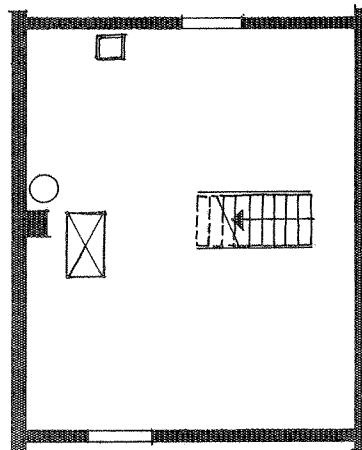
R3-32-1
Rowhouse



second floor plan



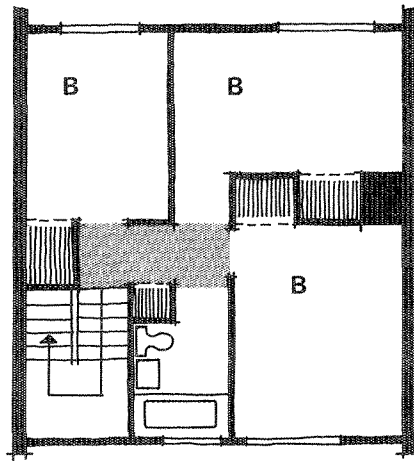
first floor plan



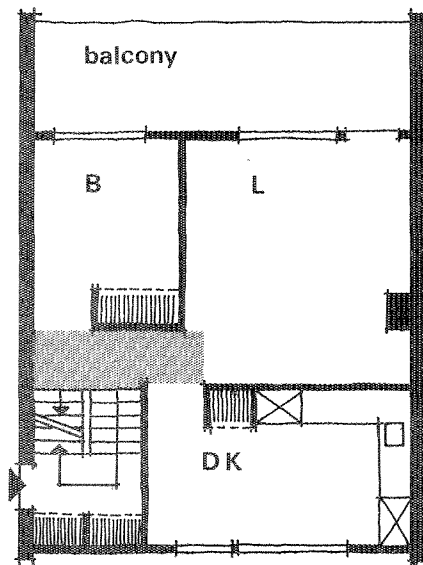
basement plan

CMHC

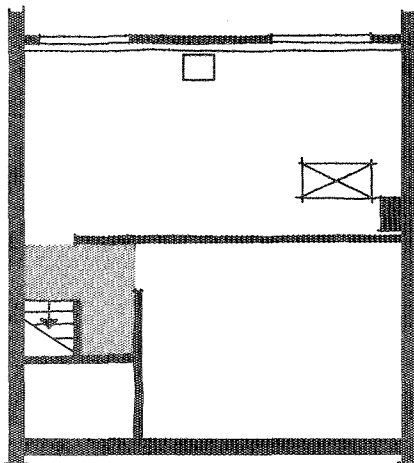
R4 — 20D
Rowhouse



second floor plan



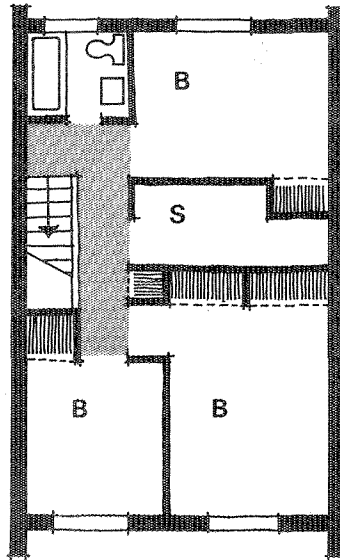
first floor plan



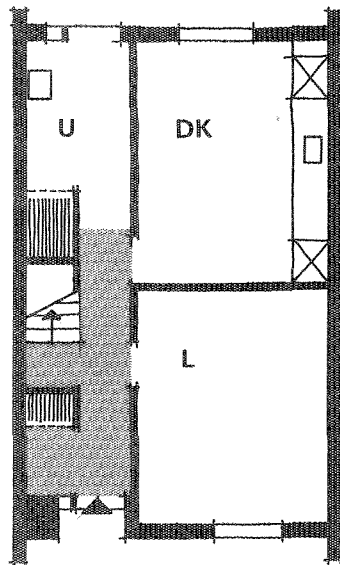
basement plan

CMHC

R3 - 42A
Rowhouse

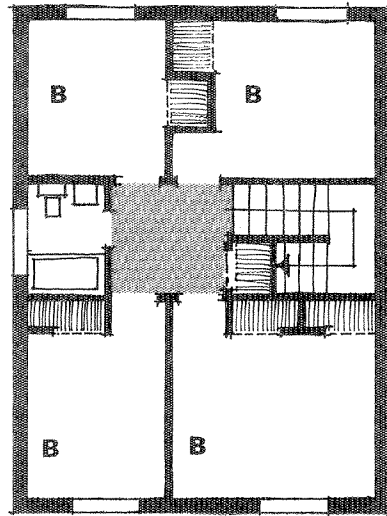


second floor plan

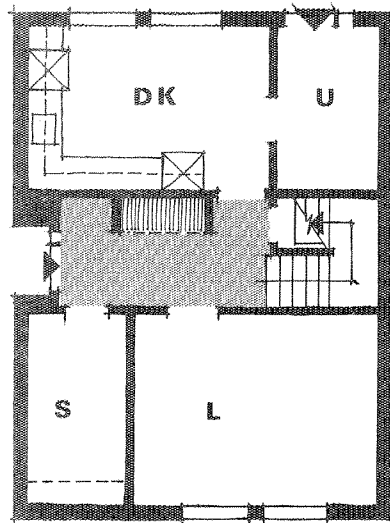


first floor plan

R4-26A
Rowhouse



second floor plan

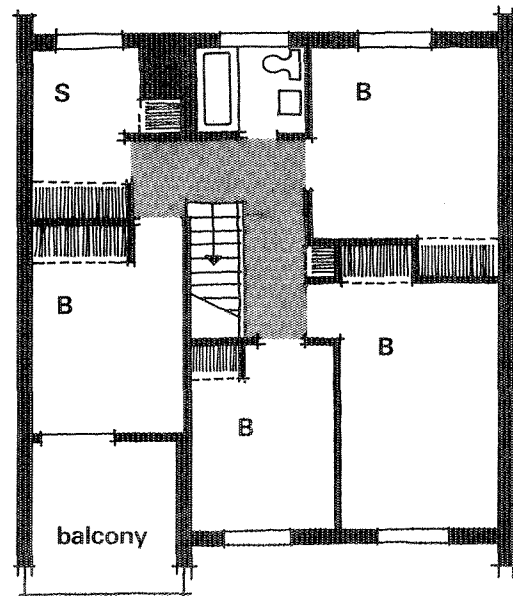


first floor plan

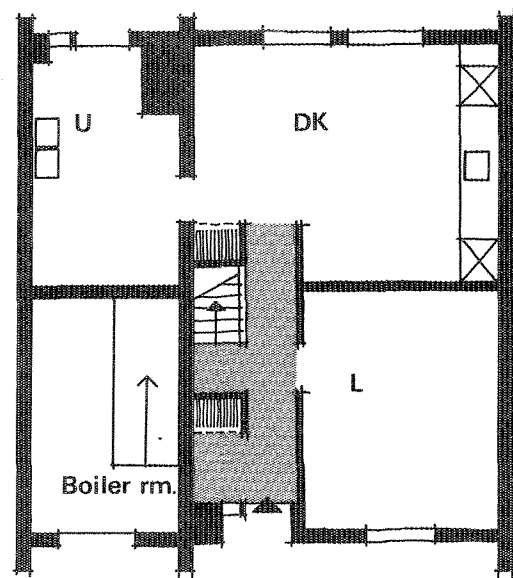
CMHC

R4-27B

Rowhouse



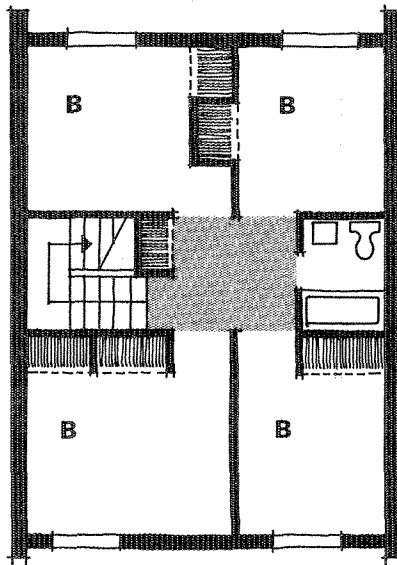
second floor plan



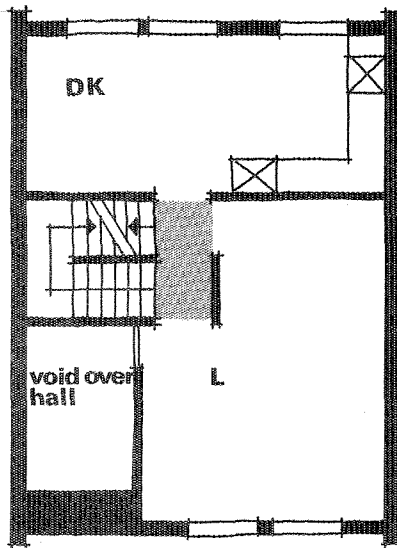
CMHC

first floor plan

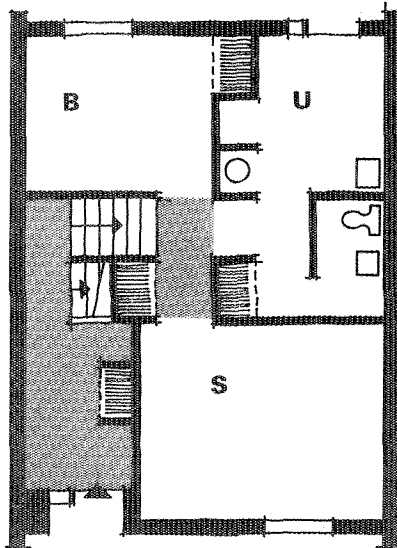
R5-10A
Rowhouse



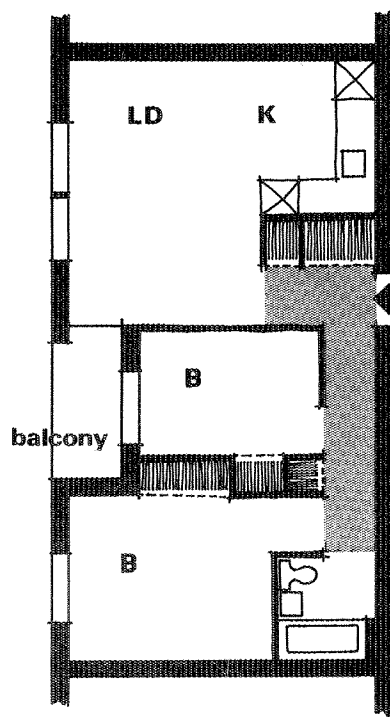
second floor plan



first floor plan

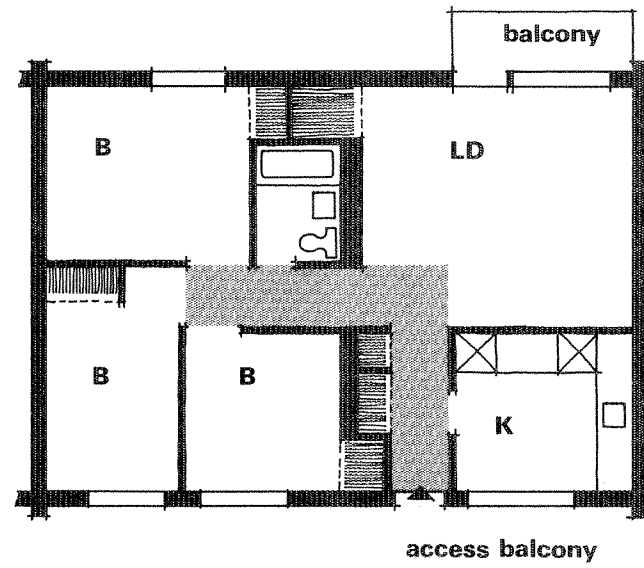


lower floor plan

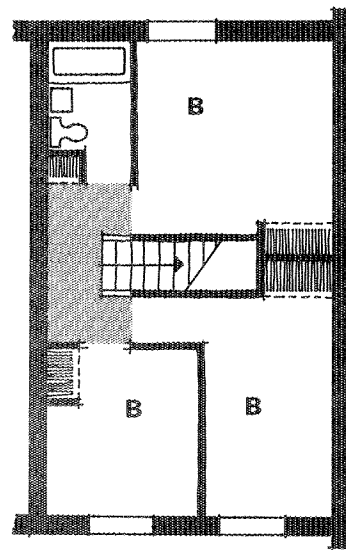


A - 2
Apartment

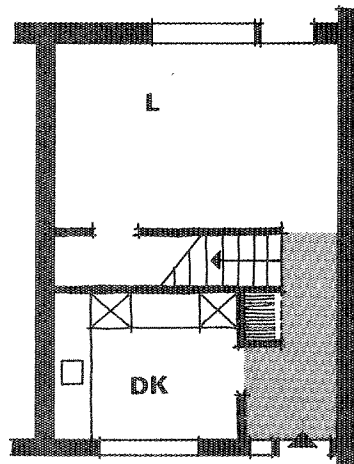
access corridor



M3-1B/A
Apartment



M3-1B/M
Maisonette

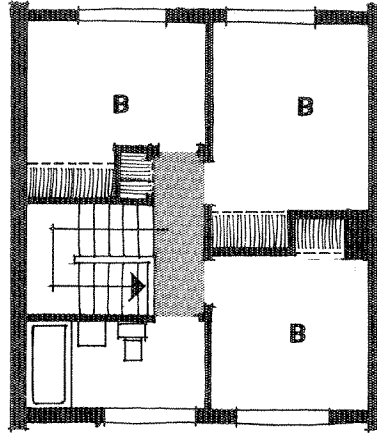


upper floor plan

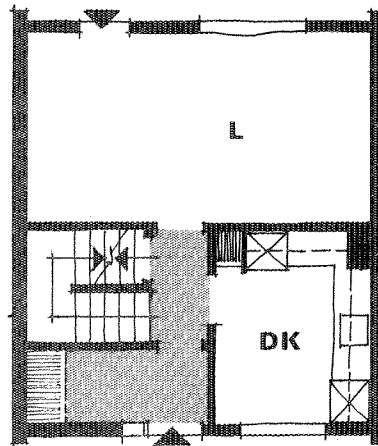
lower floor plan

R3-11A

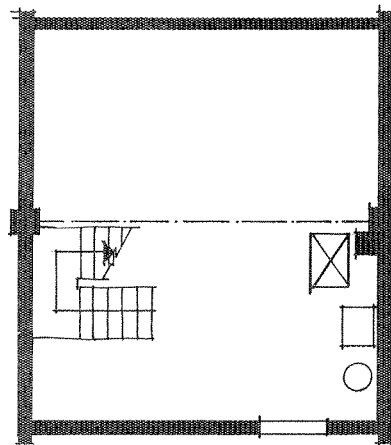
Rowhouse



second floor plan



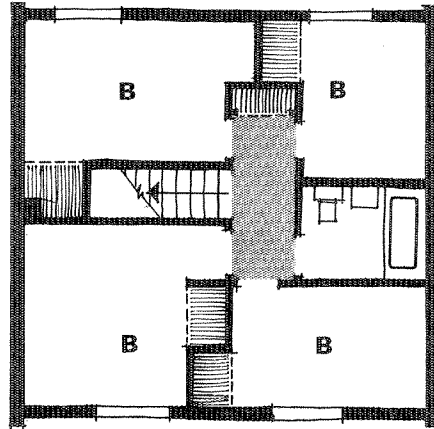
first floor plan



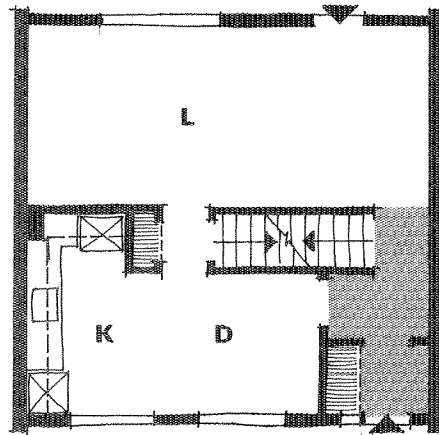
basement plan

CMHC

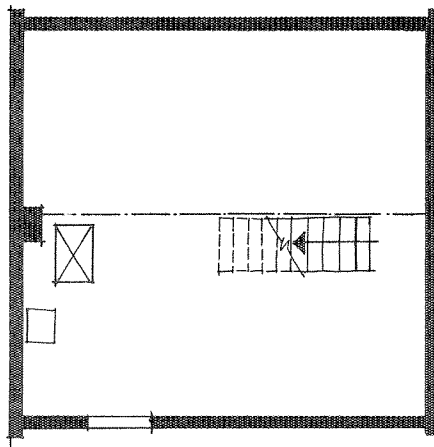
R4-7A
Rowhouse



second floor plan



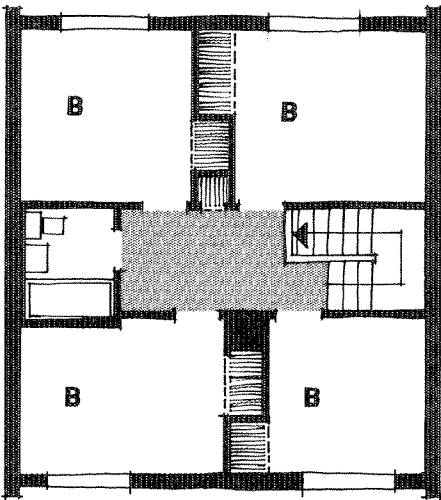
first floor plan



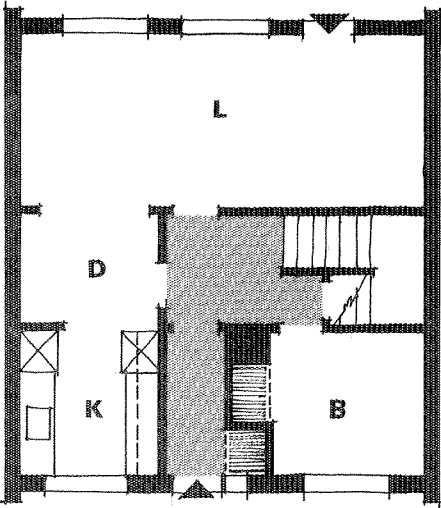
basement plan

CMHC

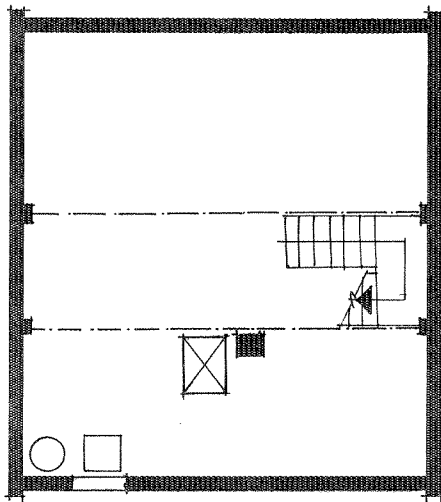
R5-1A
Rowhouse



second floor plan



first floor plan



basement plan