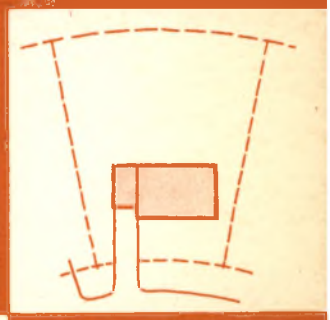
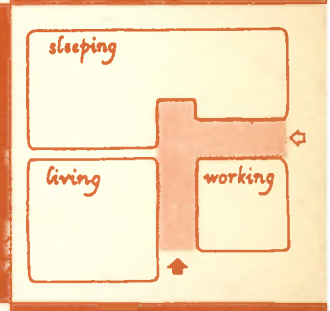
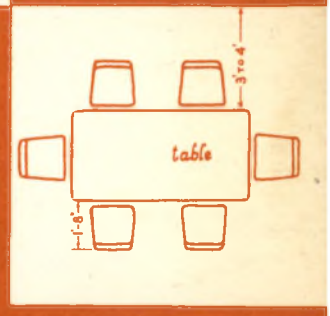
CENTRAL MORTGAGE AND HOUSING CORPORATION

CHOOSING A HOUSE DESIGN





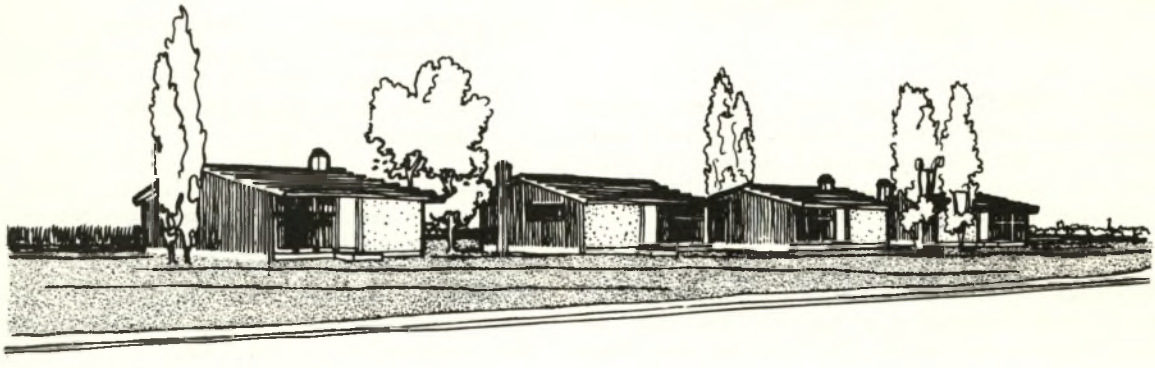


CHOOSING THE DESIGN OF A SMALL HOUSE

The decision to purchase or build a house is one of the most critical undertaken by any family. It is probably the largest single investment of the householder's resources. The location and design of the house will, in many ways, shape the lives of each member of the family.

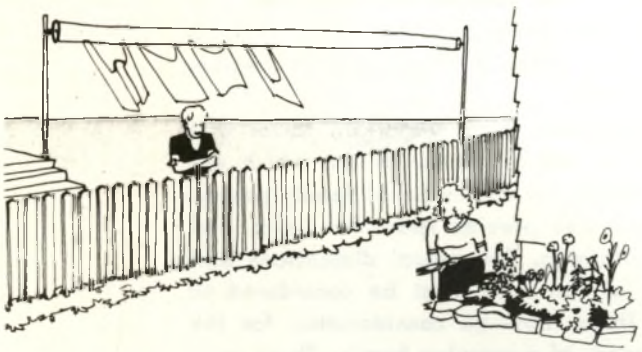
When money is an important factor it is not easy to select a house design which will accommodate all the essential family possessions and also provide space for living and for entertaining. The actual dimensions and placing of furniture must be considered in detail. There must be consideration for the future needs of a growing family. There must be good judgement in the choice of an architectural style which will stand the test of time and justify the expenditure on construction and maintenance.

This book is published as an aid to prospective owners of small houses. The Central Mortgage and Housing Corporation also publishes a book illustrating house designs for which working drawings can be obtained. With the help of the suggestions contained in the following pages perhaps the prospective home owner will find it easier to choose the design which particularly suits his needs.

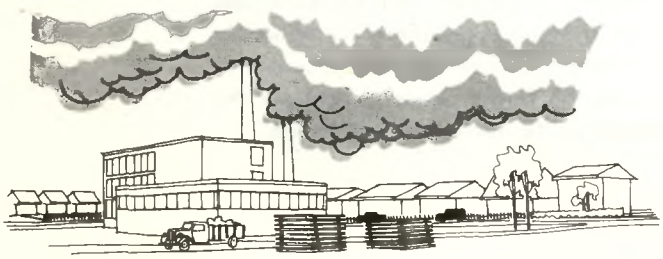


CHOOSING A NEIGHBOURHOOD

CHARACTER Look for a place which has a large proportion of owner-occupied homes, well designed and constructed and of consistent character. Look for a place in which you are likely to find congenial neighbours.



Normal community requirements are a good school, shopping centre, churches, a park or playground and a community centre close by. Easy access to where you work and to the town centre (good connecting roads and dependable transportation service) should be considered. Factories and commercial buildings should not be too close to the site.



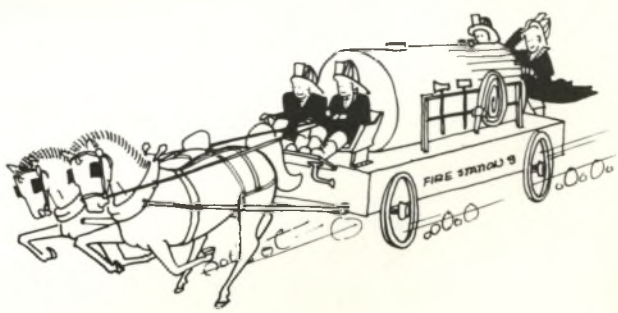
ECONOMIC STABILITY Look for a site in a young neighbourhood which is in the process of growth and expansion. Is the neighbourhood improving and reaching its prime or is it already becoming decadent? If possible, build where real estate values are rising.

RESTRICTIONS Find out what restrictions there are on the cost and construction of houses. These may be either a help or a hindrance. The local building code may impose restrictions on the form of construction. Zoning regulations may dictate the size and type of dwelling. If there are no zoning restrictions this may devalue the property by allowing undesirable development of adjacent land.

LOCAL GOVERNMENT Take an interest in the local governing body. It is responsible for the tax assessments and the degree of service you may expect to get in return for your taxes. Investigate the tax structure and make sure you can afford the taxes.

SERVICES There are three kinds of service you should expect to find efficiently administered.

Maintenance Services These include the services for the general upkeep of the neighbourhood, the paving, repair and lighting of streets, regular garbage removal, snow clearance and street sanding in wintertime.



Protective Services These include fire and police protection. If utilities are not installed there will be no fire hydrants. Good street lighting and street maintenance add to the efficiency of police protection.

Communication Services These include mail delivery, available telephone services, public transportation and delivery from department stores.

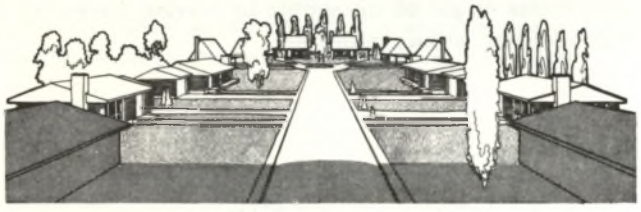
If you are satisfied that the neighbourhood meets these requirements, you may then proceed to consider the choice of an individual lot.

CHOOSING A LOT

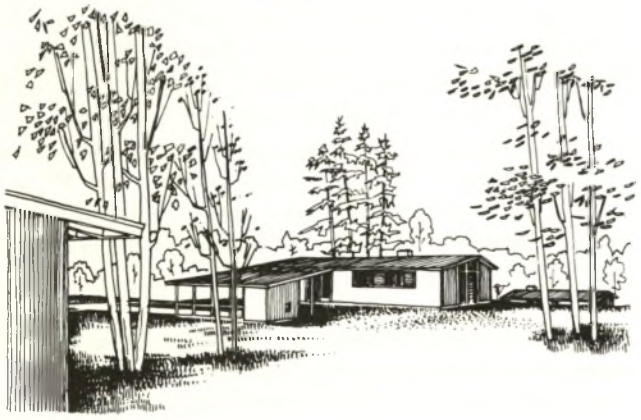
If you already own a lot, it may be worth reviewing it in the light of the foregoing considerations before deciding to build. If it does not meet all requirements, or enough of them, you may wish to dispose of the lot and buy another.

If you are **looking** for a lot, first choose your neighbourhood and satisfy yourself that you will be happy there. Then search for a lot which appeals to you, considered from the following viewpoints:

Try to find a lot on a street which —



— is short, quiet and free from traffic. Short loops and culs-de-sac normally fulfil these requirements. Straight streets with many intersections are likely to be dangerous.



— has a pleasant setting, is of pleasing proportions and has a parklike atmosphere. The value of mature trees on a street is great.

— is paved and has local improvements completed and paid for. If the road is unpaved and utilities not installed, check with the city engineer to find out when this will be done and if you will be assessed for local improvement taxes; meanwhile you may have to maintain a well and septic tank disposal system.

The registered plan of the locality should be checked in the city engineer's or city surveyor's office. This plan will give you an idea of the projected future growth of the district. You might discover, for instance, that a four-foot wide public footpath has been planned between your lot and your neighbour's, or that the bottom of your garden abuts a future public playground. These could detract from the value of your property. Find out such facts before you build, not after.

Preferably choose a lot that is on high ground. It is likely to be better drained. There is a tendency for properties on lower levels to be the first to depreciate in value.

Consider the frontage regulations of the street and whether houses on adjoining lots would block one another's view. Consider whether the design of your house would be incompatible with its neighbour's and so detract from their value. These are considerations of architectural good manners.

Consider the direction in which the house would face. A wide lot with the street to the north is often considered desirable because the living room can then have a southern exposure (preferably south east) and so take advantage of the garden aspect rather than the street approach. Large glass areas should not face northwards or be located on the windy side of the house.

At the city engineer's office check the depth of the sewer pipe under the surface of the road. If your basement is to be lower than the sewer, difficulties may be encountered in making connection to it and in draining your basement. You will save money if only one trench is needed to bring the various services and public utilities to your house.

Where local improvements have not yet taken place and there is no sewer, find out from the city engineer if the lot is large enough to accommodate the weeping tile bed from your septic tank. There may be city or provincial regulations governing lot sizes in such cases; the recommendations of the National Housing Act building standards should also be noted. Find out when the sewer is to be built because you may have to bear some of the cost of installation.

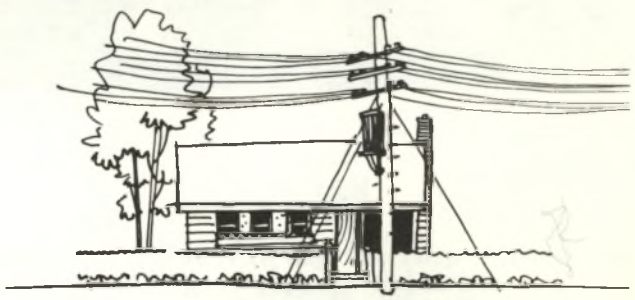
If you have to provide your own water supply, consult the local officer of health who will advise you on the safety of the local well water. Make preliminary investigations into the cost of drilling a well. The cost might determine whether or not you buy the lot. It is important that the well be correctly placed on your lot so that the water is not contaminated by seepage from adjacent sewage filter beds.

Investigate the former use of the lot. In the case of filled land you should ascertain the depth of fill and the period over which it has consolidated. It may also be wise to obtain an engineer's opinion; he may advise test borings because depth of fill can be a determining factor on the cost of the footings.

Avoid building on swampy ground or on a lot with rocky outcrops unless you can take advantage of the latter in planning and landscaping.

Look for a lot with good sound trees and consider how they may be protected during construction. If they can be saved they will enhance the value of your property.

Check the location of telephone or hydro posts near your property and make sure they are not in inconvenient locations. Some municipalities or utility companies might be amenable to moving awkwardly placed posts, others might not.



You should consider the location of your garage and its approach. It is hard to manoeuver in curved driveways and those on an incline present difficulties in wintertime. Place the garage as close to the road as permissible. Consider driveway paving costs and removal of snow in wintertime. Do not waste the width of your lot by planning a driveway down one length to reach a garage placed at the rear. If you plan to have a garage make sure the lot is wide enough to accommodate it and still leave the required width of side yard.

Consider the proportions of your lot. One that is roughly twice as long as it is wide, and not more than three times as long as it is wide, is best. It must also

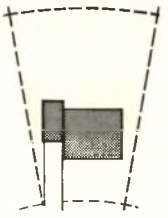
be wide enough to accommodate the side yards as specified in your locality's Building By-laws or in the National Housing Act building standards, whichever code has the higher standard.

Consider the price of the lot. You can normally afford to allocate between 10% and 15% of your total investment for an improved lot; that is, one which has all utilities and street improvements installed and is ready to build on.

Above all else, do not forget to find out what the taxes will be on your lot after your house is built. They may be the deciding point on whether or not you buy a particular lot.

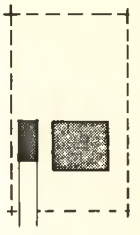
Where taxes are levied on a per-front-foot basis, lot shape is important.

Before committing yourself to buying a certain lot, arrange to have an impartial appraisal made so that your own judgement may be confirmed. This might be arranged through your mortgage lender. Check with your local tax assessment office to establish that there are no back taxes outstanding on the property. Finally, consult a lawyer who is experienced in real estate dealings. He will safeguard your interests.



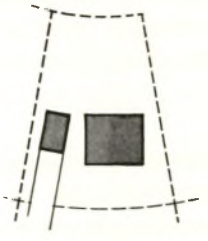
WEDGE

best — small frontage in relation to lot size



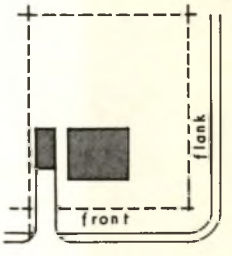
RECTANGULAR

good — next best to wedge



PIE

poor — taxes are usually assessed on length of frontage which in this case is higher than the wedge or rectangular lot



CORNER

poor — corner lots are usually taxed on the basis of the length of the frontage plus half the flankage

UNITING HOUSE

In choosing a house design you must reconcile your ambitions with your financial resources, your family's real needs and the nature of the lot you have chosen. Don't start with a preconceived idea of the house you are going to build.

The plan arrangements of a house are flexible and must be made to fit the lot you have chosen. The house plan must be made to fit the lot, not vice versa. The component parts of the plan will start to fall into place after you have examined the house layout in relation to the lot layout. This invokes consideration of such things as:

- The location of driveway and garage.
- How service deliveries are going to be made (not forgetting fuel deliveries and garbage pick-up).
- The access for children from outdoors to bathroom.
- How visitors will approach the house and where the doors will be located.
- Whether to have a picture window.
- How the sun and wind will affect your planning.

Consider first the street side of your home. This is the public side, the side seen most often by other people. The street is likely to be noisier, dirtier and less safe than the garden side of the dwelling. It is used for service deliveries and general household comings and goings. Cars are frequently parked in front of your house, either in the street or on your own driveway, causing a visual obstruction. The view may be less pleasant than that at the back of the house where there is a garden.

Because of the work-a-day purpose of the street side of the house, many home owners turn their backs on it once inside the home and seek privacy on the garden side of the house by opening up the view and making access easier from living room to garden, thus taking advantage of a pleasanter view and a safer and more tranquil aspect. This is why so many living rooms are being located at the rear, away from the street scene.

AND LOT

Picture windows are fashionable and can be pleasing. There are definite "do's" and "don'ts" in connection with their location.

— The window should be so located that advantage is taken of a good view.

— Unless you like living in a goldfish bowl, or the view is rewarding, locate it **away** from the street side of the house.

— When possible, overlook and take advantage of the garden and thus try to unite house and garden.

— Avoid facing large glass areas northwards unless the view is incomparable and you are prepared to pay a higher heating bill.

If you see picture windows facing on to both sides of a street, you will be quite right in concluding that not all these windows are in the best location. In so far as the sun is concerned, the ideal location of large glass areas is on the south or south-east side of the house. Windows so placed get about the same amount of sunlight as those facing west but they get it during the earlier hours of the day when the sun's rays are cooler. This is important during the hotter months of the year. Windows facing west admit the sun's rays into a room at a very awkward angle at sundown, a condition which does not occur when windows face the south.

There is an ideal location of the windows in relation to the wind, too. Your nearest meteorological station will be able to advise you what are the prevailing winds of both winter and summer in your district. Avoid placing large glass areas on those sides of the house which face the winter winds because, unless you provide very good weatherstripping, your heating costs will rise.

In general, you will get the most from your house plan if you can have your living room on the southern side and at the rear, overlooking your garden; place the kitchen and service entrance near the front of the house; place the stairs and bedrooms to the north or west of the living room. Not every room in every house can be oriented perfectly, but observation of simple rules will avoid the worst errors. Because a house plan has been successfully used on one side of a street, do not conclude that it will be equally successful on the other side.

HOUSE TYPES

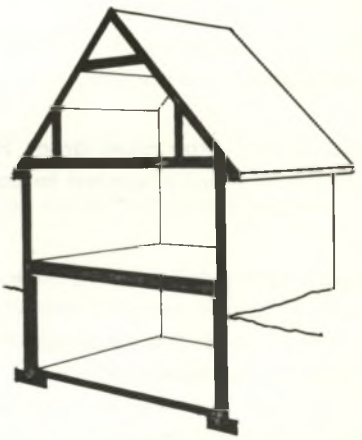
Here are the four basic types of house. Each has its advantages and disadvantages. Your choice will be determined by a balancing of these, by considering them in relation to your site and your personal preferences.

THE BUNGALOW

The bungalow has the advantage that all habitable rooms are on one level. Because there are no stairs to climb (unless it be those from the basement) the housewife's work is less fatiguing and there are fewer accidents. If you intend to make additions to your home, it is often easier and cheaper to add to a bungalow. The single level offers scope for open planning which gives an impression of spaciousness. On the other hand heating problems may be encountered if the plan is too spread out. A bungalow needs twice as much roof and foundation as a 2-storey house of the same floor area. Therefore, living space of more than about 1,000 sq. ft. can be provided more economically in a 1½- or 2-storey house.

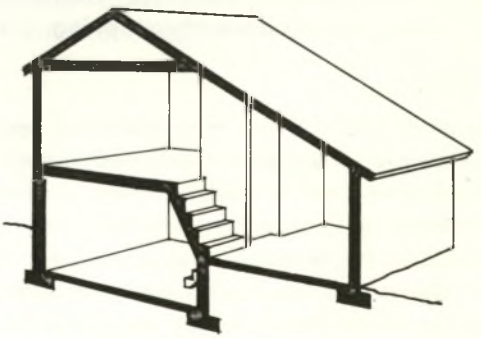
THE 1½-STOREY HOUSE

This possesses the bungalow "look", yet 75% more floor area is available under almost the same amount of roof. This means that the ground floor area can be less than that of a bungalow. The second floor can be left unfinished until the family expands and needs it. The storey-and-a-half house undoubtedly provides the greatest amount of floor area for the least capital outlay. Many designs for this type of house require dormers. Dormers add to the cost so try to keep them to a minimum by obtaining light through the gable ends. If more than two bedrooms are required on an upper floor this accommodation can best be provided in a 2-storey house.



THE 2-STOREY HOUSE

This can often be used to advantage on narrow lots which are insufficient in width to accommodate a wide frontage bungalow embodying a similar floor area. Two-storey houses are compact and, therefore, easy to heat. However, small two-storey houses have a tendency to look "boxy" because they are about as wide as they are high. This is a design problem which requires careful attention; the difficulty can sometimes be overcome by grouping pairs of houses and by emphasizing horizontal lines.



THE SPLIT-LEVEL HOUSE

This new type of house has some of the advantages of the bungalow and of the 2-storey house. It provides easy communication because each floor level is only six or seven steps from the next; at the same time it provides a greater separation between the sleeping and living areas. Though it can be used on a level site it is most useful in solving the problems imposed by a sloping lot.

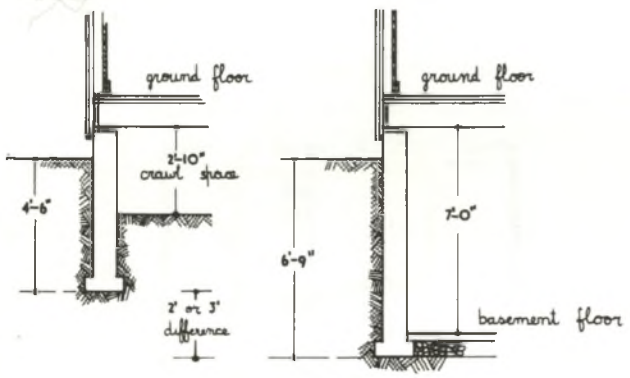
BASEMENT—Yes or No?

In choosing a house design, the question of whether or not to have a basement inevitably arises.

Here are some advantages offered by basements.

— They provide space for furnace, for fuel, for laundry, for baggage and other storage and often provide a rumpus room and work shop.

— If a similar area were provided on the ground floor the total area of the house would have to be enlarged. This would cost considerably more due to added amounts of foundations and footings, walls and roofing.



NO BASEMENT WITH A BASEMENT

— Since in our winter climate the footings have to go down below the frost line anyway (except where the house is constructed on a concrete slab), the additional 2 or 3 feet depth of excavation to provide a basement costs relatively little and can be done rapidly by bulldozer or shovel at the same time as the rest of the excavation. The only further cost is that of the additional depth of wall, of the basement floor and the basement stair.

— Sometimes it is an economy to have a partial basement just to house the furnace and fuel. If, however, the size of the partial basement approaches or exceeds one half of the area of the floor above, then there is little saving. It might as well be a full-size basement.

— With modern heating units and well constructed buildings, basements need no longer be dirty or dank. Drying of laundry in wintertime can thus be conveniently done in the basement.

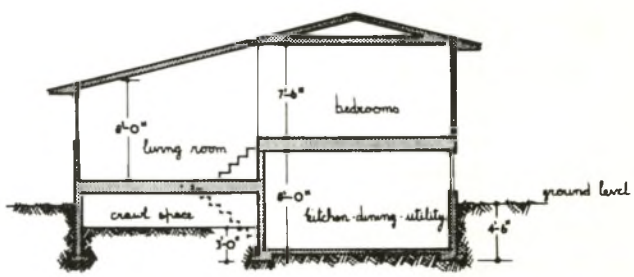
— When relative grades between street and lot present the opportunity a basement can be combined with the garage at that level.

— With a basement a wider selection of heating systems is open to the owner. These include **gravity**-type hot air and hot water systems. Whereas with a ground floor heating room two methods only are feasible, hot water—either radiators or radiant heating—and hot air, both of which must rely on forced circulation.

Here are some disadvantages.

— Any storage or work involving the basement entails carrying up and down basement stairs. Laundry, in particular, can often be done more conveniently on the ground floor, sometimes in the kitchen, sometimes in a utility room which may also house the furnace and its fuel as well as some household storage. Utility rooms can also be used for drying the laundry in the winter. In summer it is easier to step directly into the garden to hang wet washing on the line than to haul it up the basement stairs.

— Basements are not practical if there is rock on the lot which will make excavation expensive, or where the soil holds water and the drainage is poor.

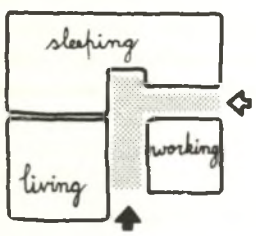


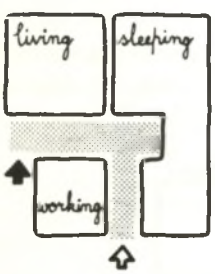
The split-level house is a convenient compromise. Its footings need be no deeper than those of the basementless house. The depth of footings in the ground is determined by frost penetration and is usually not beyond 4'-6". The excavation for the semi-basement of the split-level dwelling is only something less than 3 feet deeper than is required in a house with no basement and it need only encompass half the area of the house.

DEVELOPING A HOUSE PLAN

As you consider uniting house and lot you will at the same time be forming ideas about the interior arrangement of the dwelling.

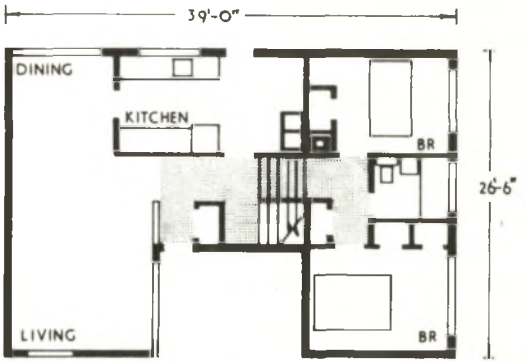
The component elements in the plan of a house are the three areas required for living, for sleeping and for working. These must be arranged in relation with one another so as to satisfy the family's living habits and so as to take full advantage of the lot on which the house is built.



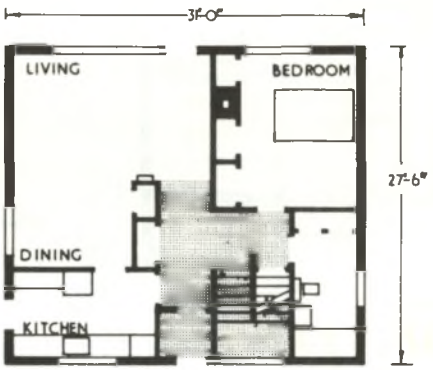


These three areas are connected by the communicating elements of the plan: the halls, stairs and doorways.

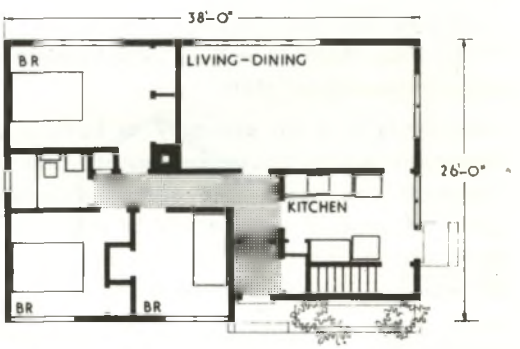
The successful design of a house emerges out of the simple distinction between these three major divisions which embrace all the various activities of each individual member of the household. You may have to consider a number of different arrangements before you find a satisfactory solution, even when you have already decided whether to have a bungalow, 1½-storey, 2-storey or split-level house. The problem in every case is to place the three areas and connect them with the minimum amount of communicating space so that it is possible to pass from one area to another without passing through the third.



Two bedroom split-level ***K. R. D. Pratt Architect***



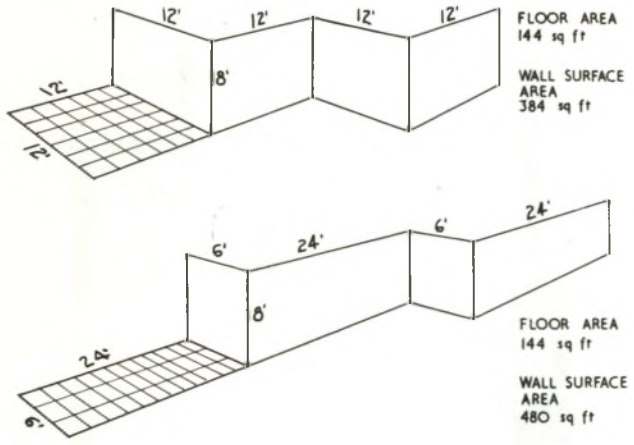
Three bedroom 1½ storeys ***Henry Fliess Architect***



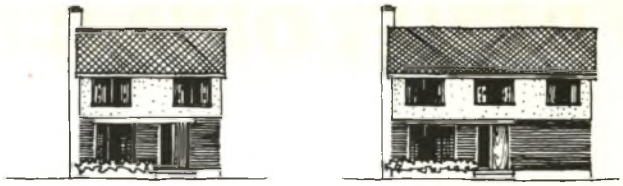
Three bedroom bungalow ***A. McPhalen Architect***

At the same time you should consider the following propositions:

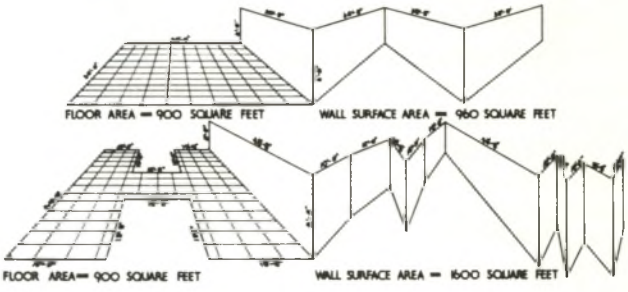
1. The square has less wall area than any other shape generally used in house planning.



The larger the wall area, the higher the construction and maintenance costs. Also, an increased outside perimeter will result in an increased fuel consumption. Unfortunately, when built, the house with a square plan usually looks less attractive than one with a rectangular plan and having a longer frontage. This is particularly true of a 2-storey house. Some compromises are therefore necessary.



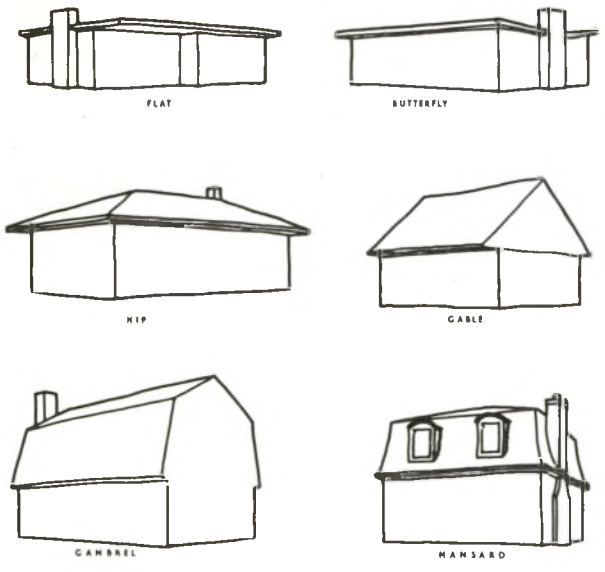
2. Consider also the difference between the wall areas of a simple rectangular plan and a cut-up plan. A simple plan shape requires less enclosing wall surface and is thus cheaper.



3. Corners represent additional expense, whether inside or outside. In the two plans above the simple rectangle has only four, whereas the lower one has twelve. Corners projecting inside a house wear badly, particularly when they are in exposed and vulnerable locations.

As your house plan evolves and progresses, give some thought to the arrangement of furniture.

ROOF TYPES



Generally there is not a great difference between the cost and efficiency of a pitched roof and a flat roof. While consideration should be given to the cost and the task of repainting gable ends, it is possible with a reasonably pitched gable roof to use the space under the roof slope for living and for storage. This is not so feasible, however, with a hipped roof which, incidentally, is slightly more expensive to construct because of complicated framing, additional labour of laying the shingles at the four intersections and additional lengths of gutter.

The lower slope of a mansard roof usually does double duty as both roof and wall. This type of roof is seen largely in Quebec.

The simpler the roof, the lower the cost. Those with a variety of slopes and changes in roof surface add to the cost of the dwelling; dormers and projecting porches require additional cutting, framing and flashing. In addition, maintenance will be more expensive for the most complicated types of roof.

FURNITURE SPACE

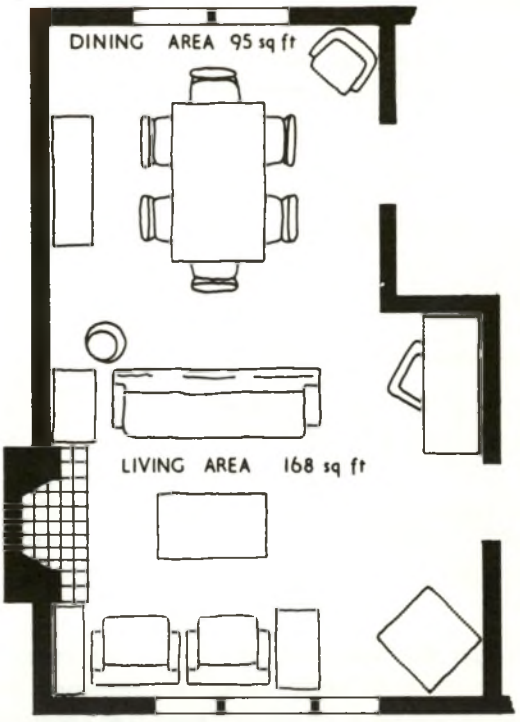
How much space is required for the furniture in a small house? This is an important consideration in trying to devise an economical house plan with reasonable minimum dimensions. In buying furniture it is also important to select pieces which do not occupy too much floor space. Bulky old-fashioned furniture wastes space. Furniture is well designed if it is comfortable, convenient, compact, light, easily cleaned and gives both the impression and effect of free floor space.

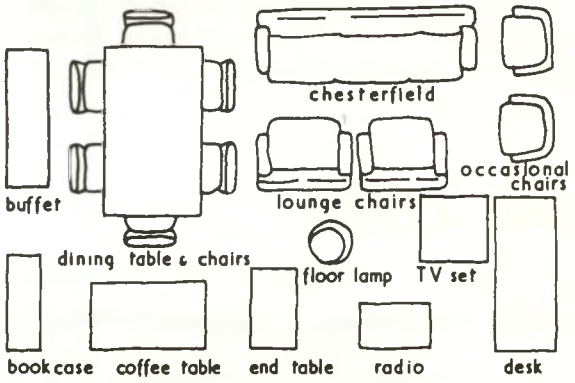
LIVING AND DINING SPACE

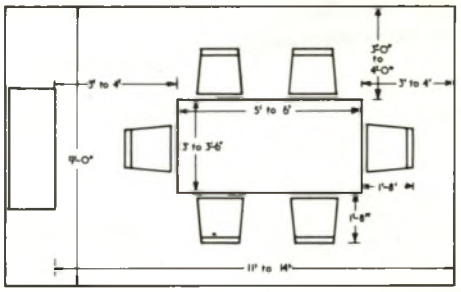
The floor area of a combined dining and living space may average 260 square feet. About half of this space will be occupied by the following articles of furniture:

1 Chesterfield	3′-0″ x 7′-0″	21 *sq. ft.*
2 Lounge Chairs	2′-6″ x 2′-10″	14 " "
2 Occasional Chairs	2′-4″ x 2′-4″	10.8 " "
1 Coffee Table	2′-0″ x 3′-0″	6 " "
1 End Table	1′-2″ x 2′-0″	2.4 " "
1 Desk	2′-0″ x 4′-0″	8 " "
1 Radio Victrola	1′-4″ x 2′-6″	3.3 " "
1 T.V. Set	2′-0″ x 2′-0″	4 " "
1 Desk	2′-0″ x 4′-0″	8 " "
1 Floor Lamp	1′-0″ x 1′-0″	1 " "
1 Bookcase	1′-0″ x 3′-0″	3 " "
1 Buffet	1′-8″ x 4′-0″	6.6 " "
1 Dining Table	3′-6″ x 6′-0″	21 " "
6 Dining Chairs	1′-6″ x 1′-6″	13.5 " "
	TOTAL	**122.6 sq. ft.**

In addition to the floor space actually covered by furniture it is necessary to consider the clearance spaces between pieces of furniture when they are placed in use. There must be space for moving chairs and for circulating about the room.







Space required for dining room furniture and circulation

BEDROOM SPACE

Bedrooms vary in size, usually somewhere between 80 and 150 square feet. Furniture is likely to occupy almost half the floor area. The remaining space is necessary for dressing, to give access to drawers and cupboards and to enable the housewife to make beds and to clean with mop and vacuum cleaner.

Minimum Furniture for a Single Bedroom.

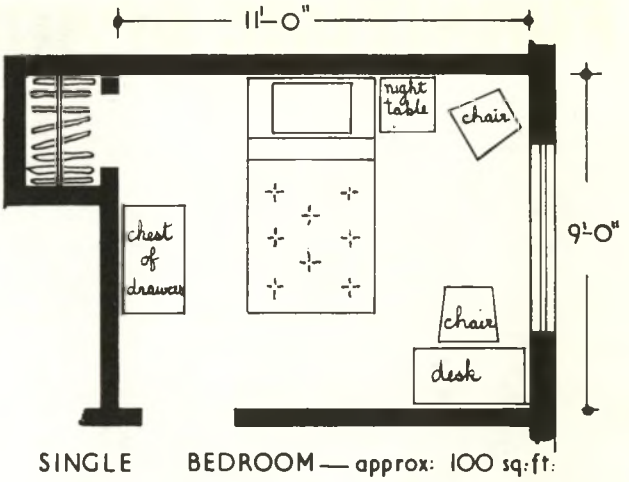
Bed	3'-8" x 6'-10"	25	*sq. ft.*
Chest of Drawers	1'-6" x 2'-9"	4.1	" "
Chair	1'-6" x 1'-6"	2.3	" "
Night Table	1'-6" x 1'-6"	2.3	" "
This furniture will take up		**33.7**	**sq. ft.**

Child's Single Bedroom.

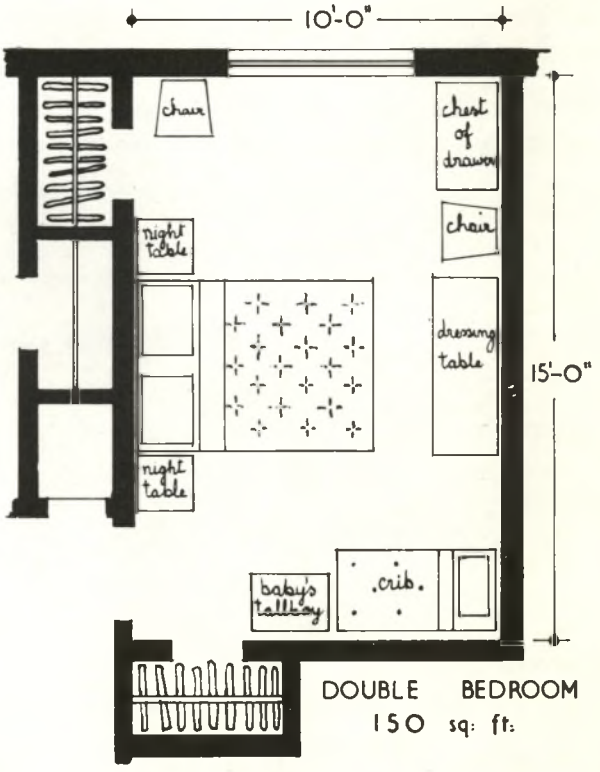
Bed	3'-8" x 6'-10"	25	*sq. ft.*
Night Table	1'-6" x 1'-6"	2.3	" "
Desk	1'-6" x 3'-0"	4.5	" "
Chair (2)	1'-6" x 1'-6"	2.3	" "
	1'-6" x 1'-6"	2.3	" "
Chest	1'-6" x 2'-9"	4.1	" "
This furniture occupies		**40.5**	**sq. ft.**

Double Bedroom.

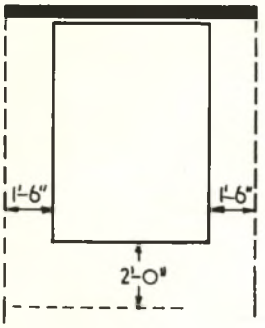
Bed	4'-10" x 6'-10"	33	*sq. ft.*
Night Table (2)	1'-6" x 1'-6"	2.3	" "
	1'-6" x 1'-6"	2.3	" "
Dressing Table	1'-6" x 4'-9"	7.1	" "
Chest	1'-6" x 2-'9"	4.1	" "
Chair (2)	1'-6" x 1'-6"	2.3	" "
	1'-6" x 1'-6"	2.3	" "
This furniture occupies		**53.4**	**sq. ft.**
together with:—			
Baby Crib	2'-0" x 3'-0"	6	*sq. ft.*
Baby's Chest of Drawers	1'-6" x 2'-0"	3	" "
		62.4	**sq. ft.**



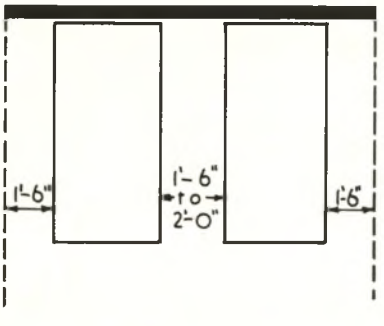
SINGLE BEDROOM — approx: 100 sq: ft:



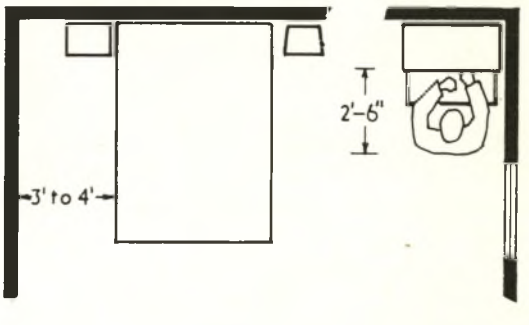
DOUBLE BEDROOM
150 sq: ft:



ONE BED



TWIN BEDS



SPACE FOR DRESSING DRESSER

Clear space required around beds

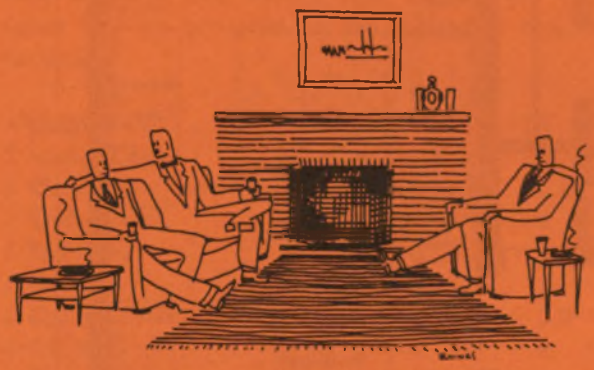
THE LIVING ROOM

Playing

Children need clear floor space, a warm floor surface and sturdy furniture without sharp corners. The underside of furniture should be clear of the floor to aid cleaning and tidying. The fireplace should be protected with an attachable fire-screen.

Games

Some games require clear floor space, as for acting or dancing. Some require a removable table and chairs. Storage of card table and games equipment should be considered.



Entertaining

Conversation requires a grouping of seats with some occasional chairs that can be set in different positions. Clear surfaces are useful for placing coffee cups, plates and glasses.

Writing

Chair and table of convenient height are required for letter-writing, housewife's accounting and evening study. Stationery supplies and filing drawer should be nearby. Light should be on left side.

Reading

Lamps should be placed so as to give direct light to several chairs without obstructing floor. Bookshelves, magazine and paper racks should be placed to aid tidying.

Of all the rooms in a house, the living room has to be the most flexible and adaptable because of its many different uses. It is the gathering place for the family as a whole and it is also where each individual pursues his own interests. Bedrooms provide personal privacy and the kitchen is the domain of the housewife. But young and old each have their rights to the use of the living room.

It is the place in which the character of the family is expressed and in which friends are received. It has to combine the requirements for quiet relaxation, for active entertainment, for study and for children's play.

Unlike other rooms which are enclosed by four walls and a door, the living room is often the open central core of the house. In contemporary houses it is often of irregular shape with openings revealing the other parts of the house and adding to its sense of freedom, accessibility and informality. For this reason the selection and placing of furniture is an essential part of the planning and design of the house. This determines the real shape and uses of the space within the living room.

Sewing

Chair suitable for sewing should be placed so that it has both good daylight and artificial light. Storage for work box and garments should be provided.

Relaxing

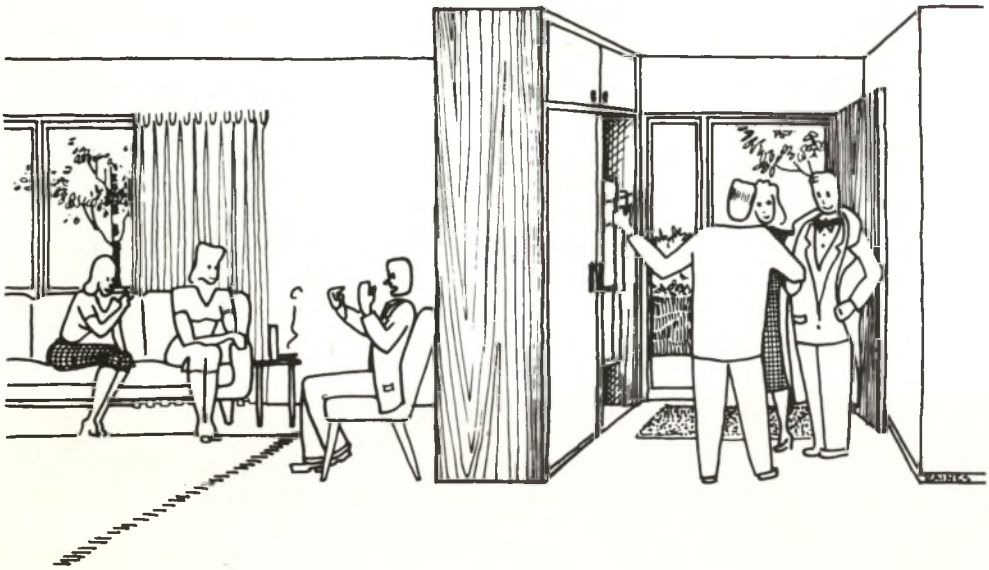
Comfortable chairs occupy most space, are most expensive and heavier to move. They therefore require most careful selection and placing so as not to overwhelm the limited dimensions of a small living room.

Watching TV

The TV set must be placed where it does not reflect light and where it is visible from the principal furniture group. There must be clear space in front of it for additional low seats.

Housecleaning

Furniture should be light and easy to move without damaging floor surfaces. It should be simple in design so as not to collect dirt and should have smooth surfaces that do not attract dust.

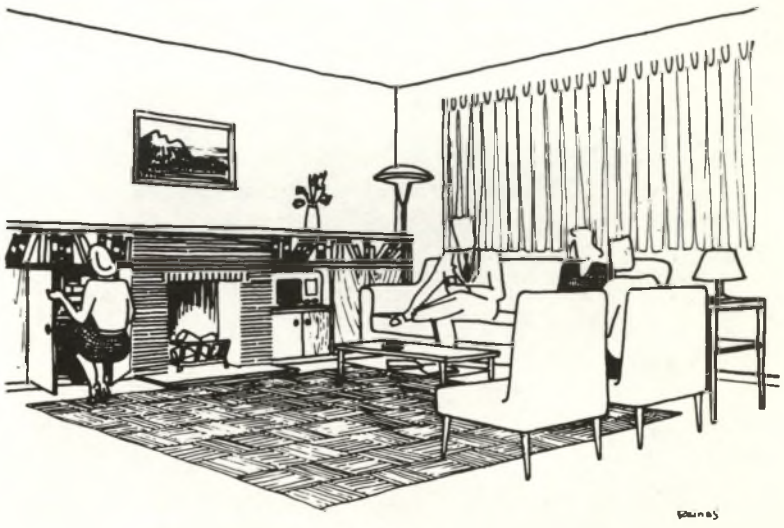


The entrance can be shielded from the living room by a screen or closet.

THIS?

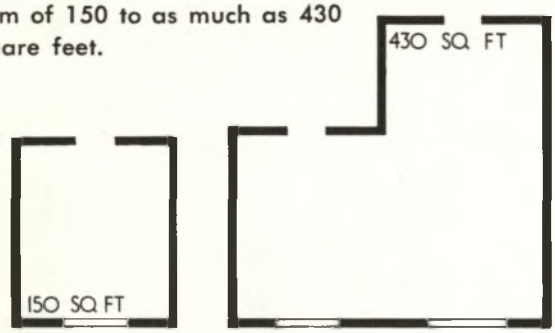
or THIS?

Which view do you want, the garden or the street?



There should be space to group both fixed and casual furniture around the fire place.

The sense of space in a small house is determined very largely by the size of the living room. Houses that have been built under the National Housing Act have had living rooms ranging in area from a minimum of 150 to as much as 430 square feet.



It is worth reducing other rooms to minimum dimensions in order to expand the central living space. By combining a dining area of about 100 square feet with a living room of about 200 square feet a very handsome space can be achieved, even in a small house.

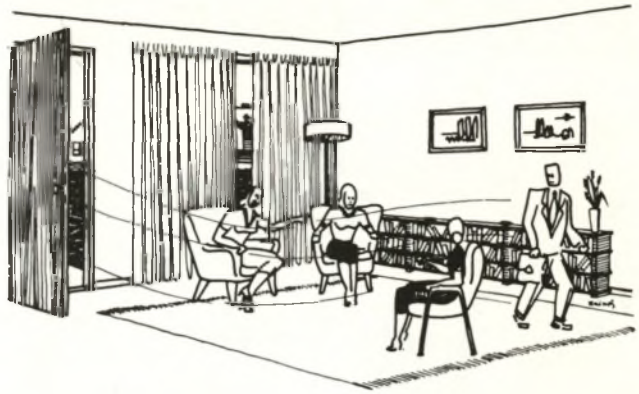
A narrow long room is hard to furnish without making the arrangement too inflexible. A squarer room is more useful and companionable. Length may vary between 16 and 22 feet, width may be between 11 and 14 feet.

Be sure that the plan provides for plenty of unbroken wall area and that walls are not cut up with openings. A chesterfield requires from 6 to 7 feet of wall length, an upright piano 5 feet and a desk between 4 and 5 feet. The height of window sills affects the amount of wall space for furniture placing. Furniture placed against walls saves open space for the middle of the room.

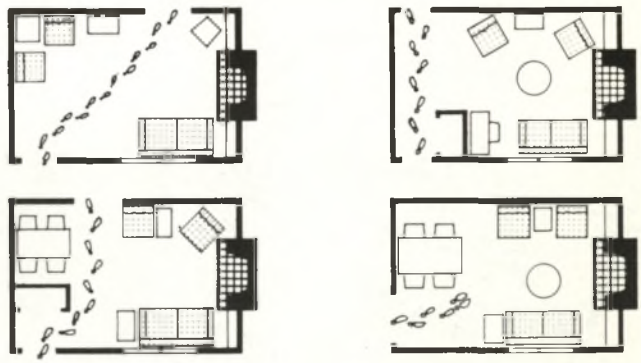
If you have a fireplace, locate it away from the normal traffic route. Remember that it will take up a length of about 5′ and that it is desirable to have 3′ of wall length on either side of the fireplace so that furniture can be grouped around what will undoubtedly become the focal point of interest in the room. Where possible the hearth should be fitted with an ash dump to the basement.

Do not locate any feature which will become a focal point, such as a fireplace or picture window, between two doorways because this may limit the furniture placement.

It is undesirable to have the front door opening directly into the living room because of draughts and loss of privacy. If there is no alternative, shield it from the room with a wall or storage cabinet thereby creating an entrance area or vestibule so that the entire room is not exposed to the front door.



The living area should not be a passage between the front door and the rest of the house. If traffic must pass through the living room, let it intrude as little as possible.



It is not worth having a picture window unless the picture will be pleasing. A street aspect may only offer noise, gas fumes and traffic. It is, therefore, more advantageous and restful to locate the living room at the rear facing, and tying in with, the family's private garden where the aspect can be controlled. You then can justify having a really handsome picture window. And you can arrange your own picture.

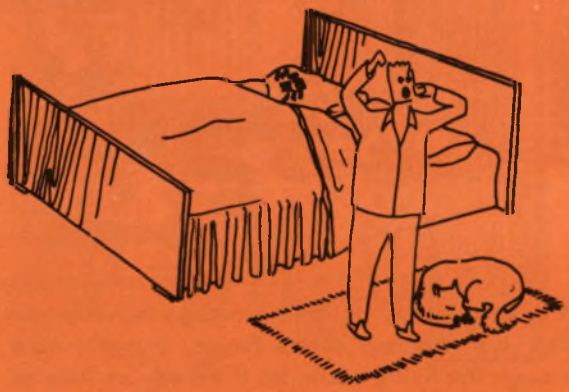
Make sure that heating outlets or radiators are so located that placing of furniture will not obstruct them.

To some extent electrical outlets govern the position of lighting and other electrical fixtures such as radio, T.V., etc. Consider the placing of these fixtures in relation to each other and the necessary outlets when planning the room and its furniture arrangement. Two double-socket outlets per wall can be used as a rough guide when planning electrical outlets for the living room.

Provide sufficient storage space for the equipment used for living room activities.

Remember that arrangement of space is as *important as amount of space.*

BEDROOMS

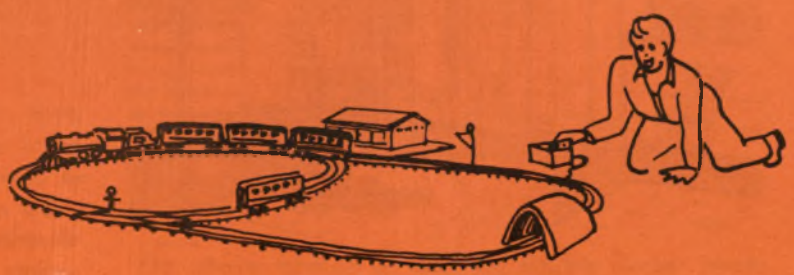


adults

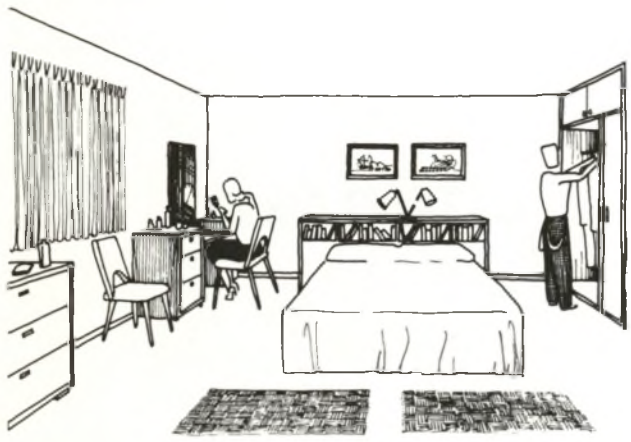
The three-bedroom house is most popular because it provides for a typical family of parents with children of both sexes. Each individual in a family actually spends more time in the bedroom than in any other room in the house. Therefore it should be tailored to suit the individual, offer opportunity for reasonable self - expression and provide a haven from the rest of the family, giving the maximum in pleasure and comfort, in leisure and quiet.

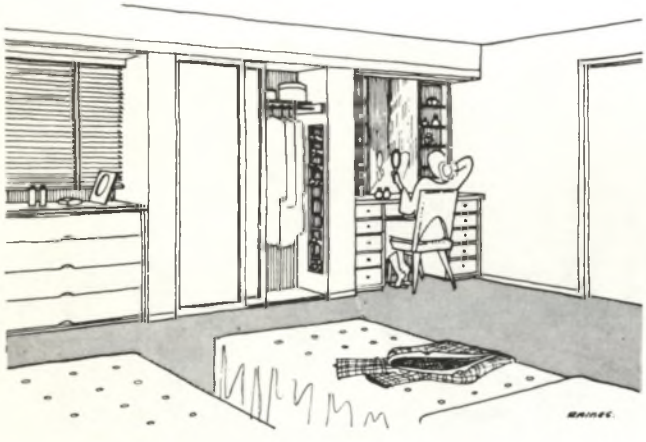
children

Children very often share bedrooms. However, when they are of opposite sexes a good time to introduce them to their own rooms is about the time they start school, or between 6 and 8 years. Youngsters are generally active and noisy so that, while their rooms should be close by those of the parents, there should be some form of sound barrier—possibly a bank of closets—separating them. Proximity to the bathroom is also desirable.

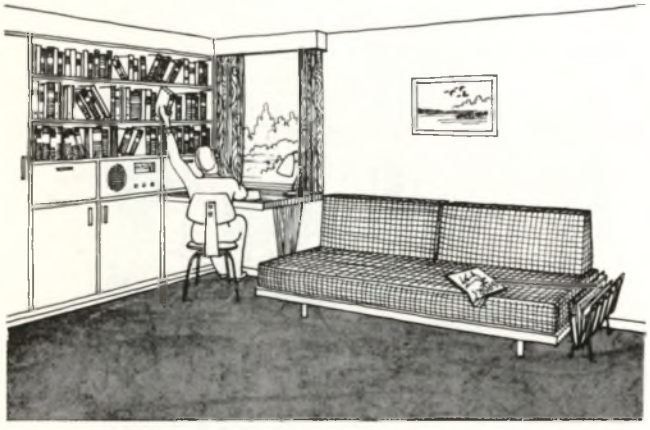


MASTER BEDROOM





Built-in storage gives the most economical use of floor space



An additional room can be both study and guest room

A minimum area of 110 sq. ft. is required for master bedrooms in National Housing Act building standards. Since furniture occupies almost half this area, it is easy to see that 110 sq. ft. is truly a minimum. There is need for space around each piece of furniture and there is need for open floor space. Therefore, it is best to have a proportion of furniture area to floor area in a ratio of 1 to 3. The following figures may be taken as a rough guide to desirable master bedroom sizes in small houses.

120 sq. ft. . . . minimum
150 sq. ft. . . . medium
180 sq. ft. . . . generous

ventilation Bedrooms need sunshine and cross ventilation. Windows do not have to be "picture windows". Higher windows which have their sills 5′ above floor level leave valuable wall space clear below this level in which to accommodate furniture. Good positioning of windows and doors is very important to the usefulness and comfort of the bedroom.

furniture Master bedroom furniture should consist, in addition to bed or beds, of two dressers, two chairs and one or two night tables. In addition there may be furniture for sewing or for studying. Don't forget that beds placed up against walls are hard to make because they have to be moved each time.

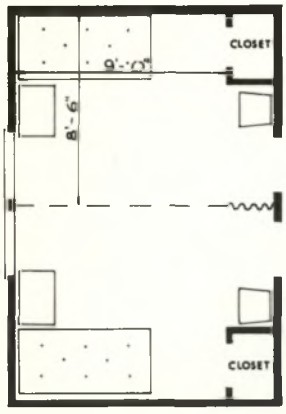
electrical outlets Decisions on placing the furniture in the room should be taken early since the location of electrical outlets must be planned.

closets Adequate closet space is important. When two adults share a room, each should have a clothes closet 3′ wide and 2′ deep. Less than this is inadequate. Clear floor space, between 4 and 5 square feet, is required for the swing of closet doors.

baby If an infant is to share the parents' room, provision should be made to accommodate the crib and a chest of drawers for clothes. The crib should be placed so that it is clear of draughts and sheltered from the glare of bright light. Other baby equipment may have to be stored in the bathroom.

SINGLE BEDROOMS

According to National Housing Act building standards a minimum area for bedrooms, other than the master bedroom, is 80 sq. ft. or a room 8′ x 10′. Essential furniture will take up 34 sq. ft. A room of about 100 sq. ft., therefore, is a desirable size.

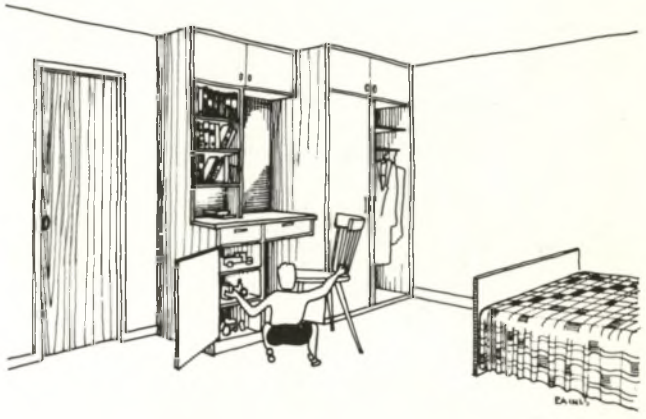


Where two children share a room, double bunks may be used to permit better use of space for playing and dressing. They can be arranged as shown so as to provide privacy. However, bunk beds are hard to make. An alternative is to combine two rooms and so obtain a larger play area. They could be divided at a later date.

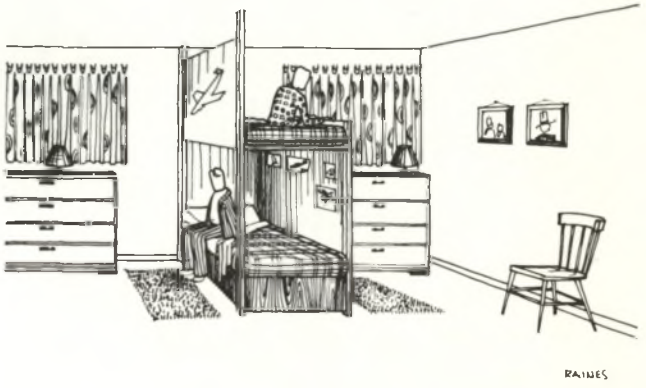
Children require storage facilities for clothes, toys, books and writing supplies. If the bedroom is to be used as a study, it must accommodate a desk. In shared rooms each child should have his own study area and his own clothes closet.

Again, if a bed is placed so that its long side is against a wall, it has to be moved each time it is made. This creates work rather than minimizes it.

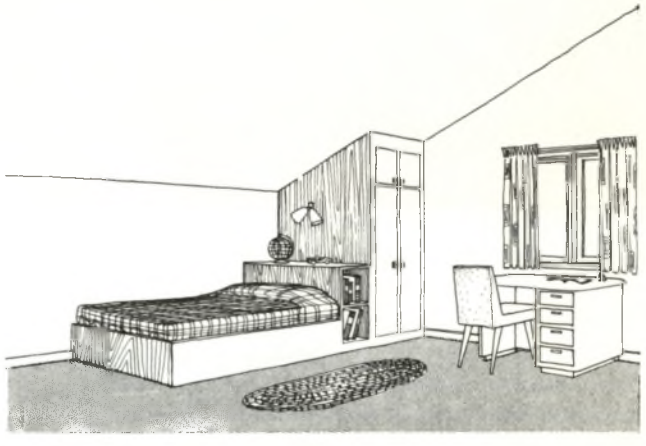
Make provision in the bedroom area for a laundry hamper or chute. More than one dirty clothes hamper will be needed where bedrooms are on two floors. Storage for clean linen and bedding is also needed and a cupboard for cleaning equipment.



Children need ample storage space for toys and books

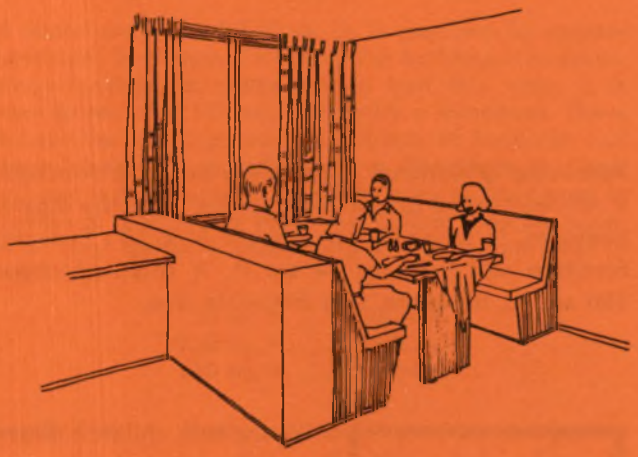


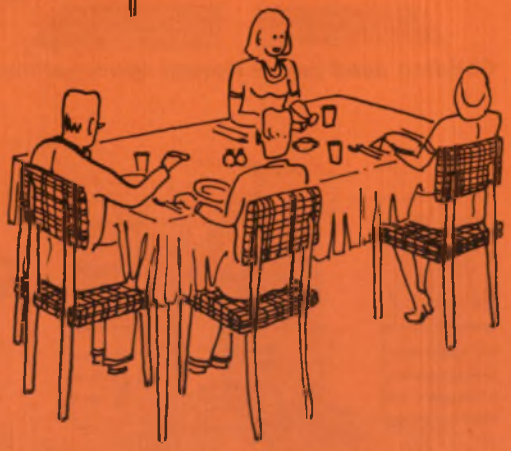
The above method of dividing double decker bunks gives some privacy

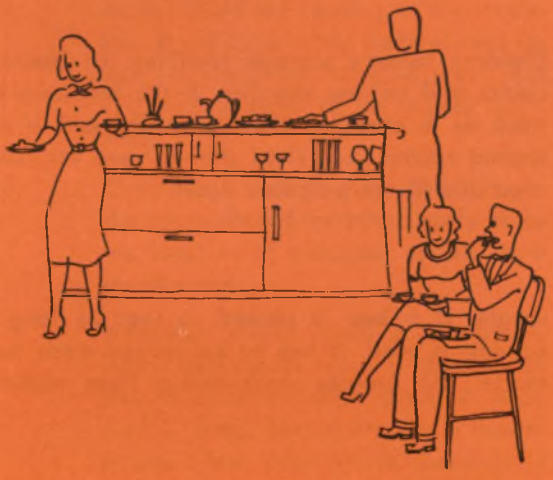


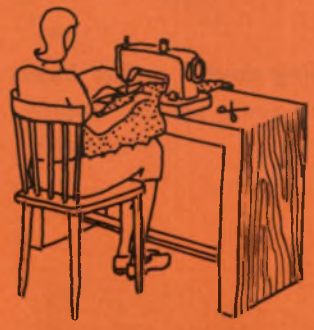
With a little ingenuity space under the roof can be turned into an attractive study bedroom for youngsters.

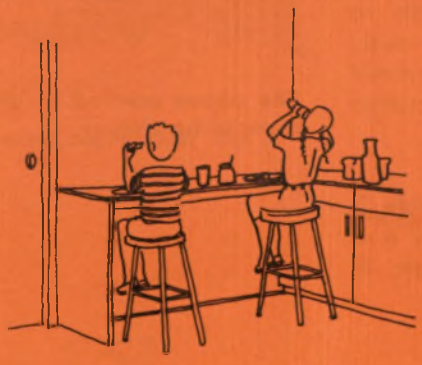
DINING AREA









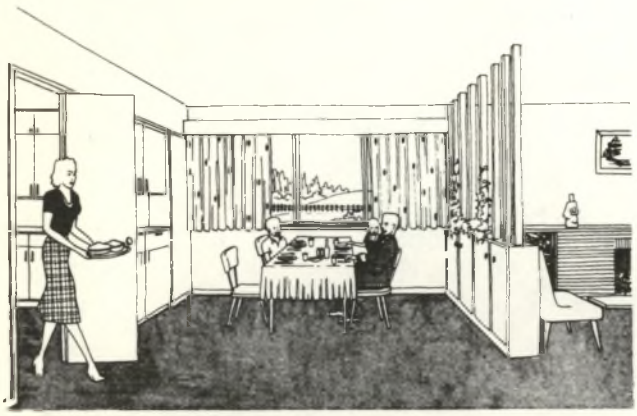


Dining room space provides for these activities. Storage space is also needed in which to keep table linens, cutlery, silver and glassware, as well as other meal-time appurtenances.

Regular meals may be served in:

1. A dining room
2. A dining area off the living room
3. The kitchen
4. A multi-purpose room

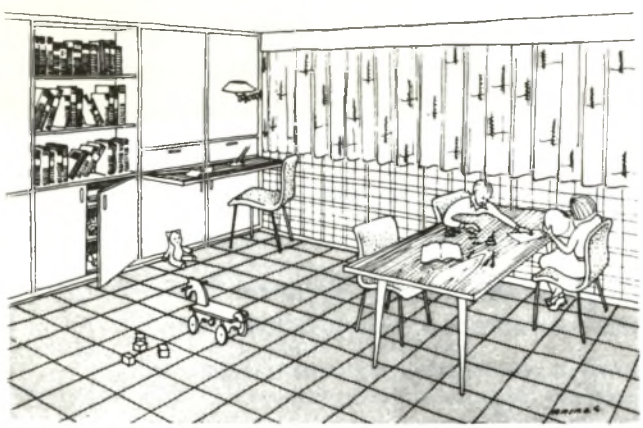
Incidental eating may also take place in the living room, using the dining room or kitchen as a base, or outside on a terrace or screened porch which may be connected with the dining room by a door.

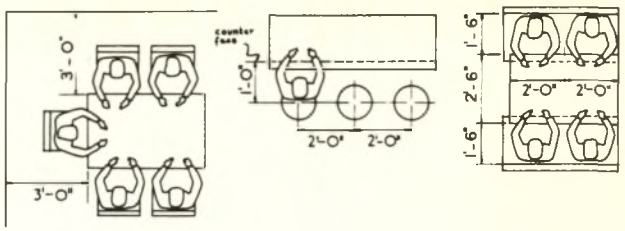


While additional eating facilities in the kitchen are most useful, they do not entirely duplicate the function of a main dining area. These facilities can be provided by:

1. An area accommodating table and chairs
2. A built-in breakfast nook
3. A counter and stools

Storage space for crockery and cutlery etc., should be near by.

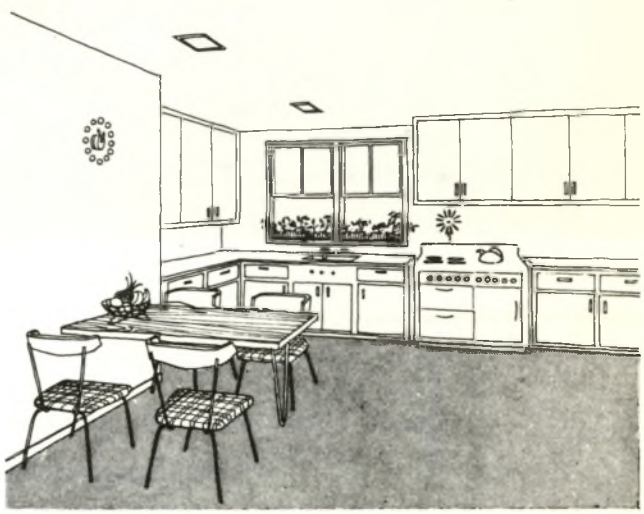




Various seating space requirements for dining

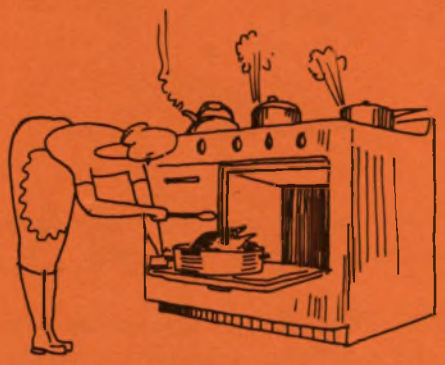
A separate dining room or a dining area clearly distinguished from the living room is desirable.

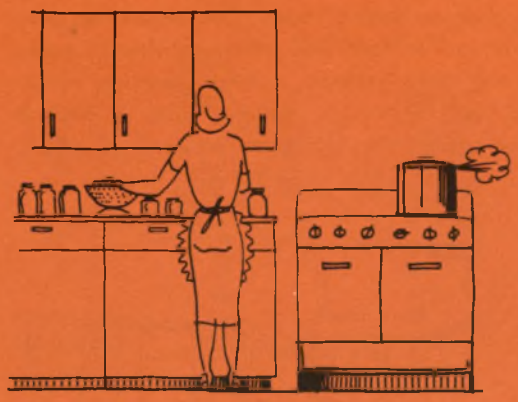
This room should be large enough to accommodate table and chairs and a buffet or sideboard. It should have ample circulation space. Table linens, cutlery, silver and glassware, and other equipment should be stored in the dining room or near by. A short carry from the kitchen to dining room is essential for easy meal preparation. In fact, the whole routine of cooking, setting the table, serving, eating, clearing, washing up and storing should dovetail into a smooth sequence requiring the minimum amount of effort.



If additional eating facilities are not provided in the kitchen they may be placed in a multi-purpose room. In houses without basements an informal common room is becoming increasingly popular because it takes some of the pressure off the living room. It can be used for children's play, games, hobbies, sewing, informal entertaining and many other purposes, and is often designed to withstand rugged wear. It should have generous storage facilities for a wide variety of family possessions.

COOKING





The kitchen serves both as a food preparation centre and as a food store. Sometimes, too, food is eaten in the kitchen. Apart from regular meal preparation, canning, baking and pickle making are done here. The kitchen is also used as a "home base" for cleaning the house, for doing laundry work and for ironing. Children's home-work and hobbies are sometimes done in the kitchen. Cleaning of items such as shoes and silver, and certain minor repair jobs also take place in the kitchen. In fact, this is the hardest used and most useful room in the house.

A regular sequence of actions takes places in preparing a meal. This sequence is:

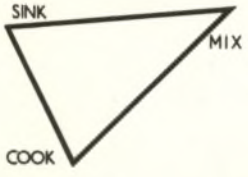
1. The assembling of the foods
2. Preparation of food, including washing, mixing, etc.
3. Cooking
4. Serving up
5. And finally, washing up

To make the handling of meals easy this sequence of food preparation should be provided for in the layout of the kitchen and its equipment.

Three work centres are necessary. They are:

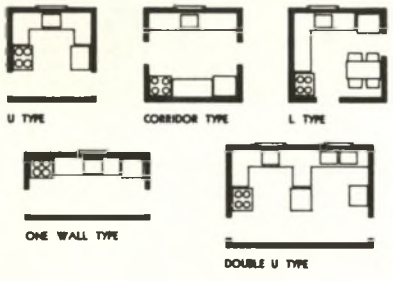
Mix Centre
Sink Centre
Cook Centre

Supplies and equipment for use at each centre should be stored there, close at hand.



There is a direct path between these centres forming a work triangle by which the efficiency of the kitchen may be gauged. The sum of the distances between these centres should not be less than 12 feet and not more than 20 feet.

The arrangement of these centres, together with that of the doors and windows, determines the type of kitchen. Here are some of the common types which work well. Note that in all but one case the work centres are placed side by side with a continuous counter connecting them.



U type
Corridor type
L type
One wall type
Double U type

The following figures are suggested for kitchen storage requirements:

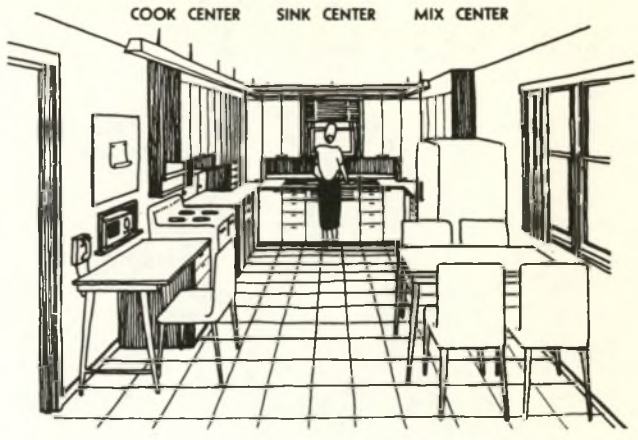
Wall cabinets, 8-10 feet in length
Base cabinets, 8-10 feet in length

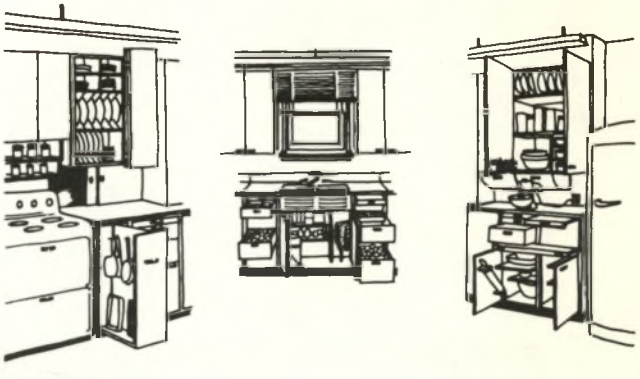
Additional storage space is needed for cleaning equipment.

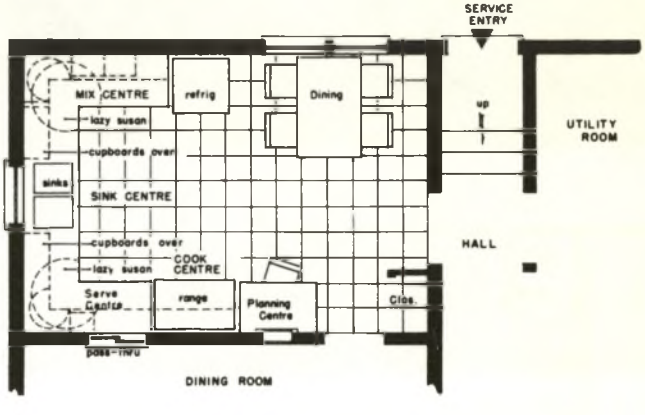
There should be counter top work surfaces:

1. Beside the refrigerator (note which way door opens). (Mix Centre)
2. On both sides of the sink. (Sink Centre)
3. At least on one side of the stove. (Cook Centre)
4. On one side of a washing machine and built-in ironer, if this equipment is included.

When planning your centres, decide whether you like to work from left to right, or right to left. This preference dictates the arrangement and which side your refrigerator door is hinged. The position of electrical outlets is also affected by this preference. Plan your kitchen with sufficient clear space to allow more than one person to move about and work at any one time.



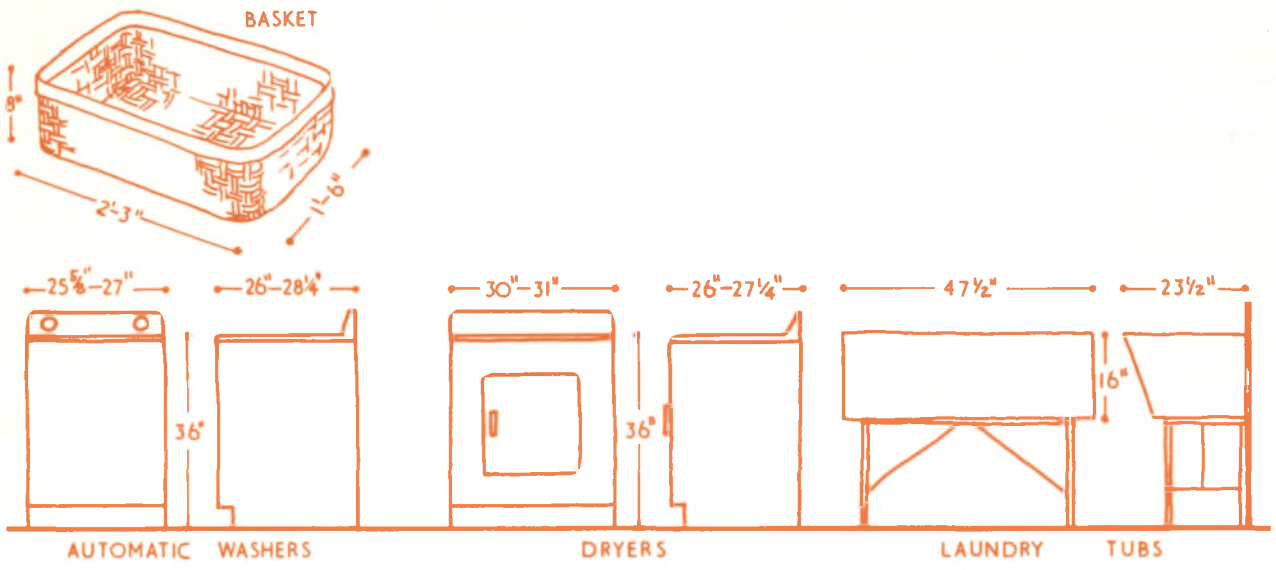




Most kitchens require 2 doors; one to the dining area and one to the service entrance. Unnecessary doors break up the assembly of the work centres and thus decrease the efficiency of the kitchen.

A serving hatch from the cook centre counter through to the dining room is often a great asset and facilitates the serving of meals.

LAUNDRY


BASKET
8"
2'-3"
1'-6"
25⅝"–27"
26"–28¼"
30"–31"
26"–27¼"
47½"
23½"
36"
36"
16"
AUTOMATIC WASHERS
DRYERS
LAUNDRY TUBS

The steps involved in doing home laundry should be considered in planning the house and in locating equipment.

storing A built-in locker is sometimes used in which to store dirty linen. Alternatively a laundry hamper or bag, or a direct chute may be used to transfer dirty linen from the bedroom area to the laundry area.

sorting A counter or table top is convenient for sorting. At this stage stains may be removed and soaking of clothes can be done in either the washing machine or in the laundry tub.

washing The introduction of the washing machine in place of tubs or double kitchen sink has changed the location of home laundries. It is possible to place an automatic machine in the kitchen or adjacent to the bathroom. Hand laundry requires more space and is more conveniently done where there is a cement floor designed to take the run-off of spilled water.

rinsing Where the housewife does not use an automatic washing machine for rinsing, a double sink should be installed.

drying Access from the laundry to the outside drying area should be easy, and from the house to the line a direct and preferably dry-shod route is desirable. Inside a wash may be hung on lines strung up in the basement or utility room or, if elsewhere, on ceiling or folding wall rack placed so as not to obstruct other activities. After drying, it is often folded into a laundry basket to await ironing. Storage space is needed for this basket both when in and out of use. Mending needs are identified at this stage as well as during ironing.

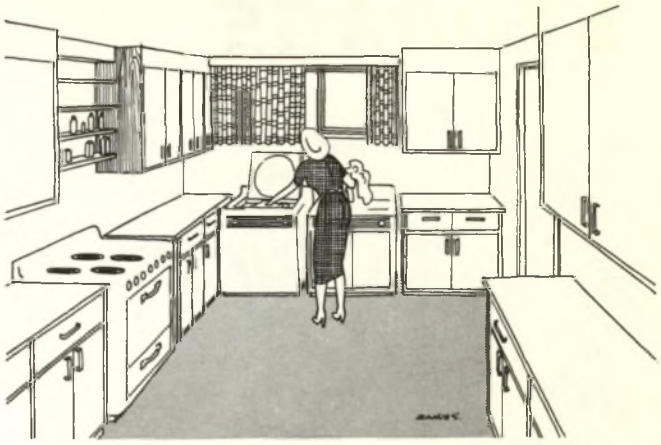
ironing & airing A convenient ironing place is in or near the kitchen where cooking may be going on simultaneously. However, iron and board are often used for pressing on other occasions. According to preference a portable or a built-in board may be used and be stored side by side with a folding airing rack on which newly ironed clothes can be hung.

There are three common locations for the whole laundry operation.

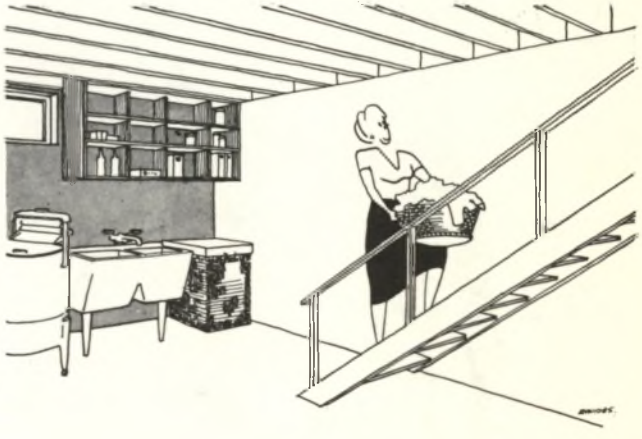
The Basement — This has the advantage that the laundry equipment is separate from other working apparatus, and that drying clothes are out of the way.

The Kitchen — This is a convenient location because the housewife is able to keep an eye on the washing machine while doing other jobs. In this case a mechanical dryer is more necessary than if the washing takes place in either the basement or utility room.

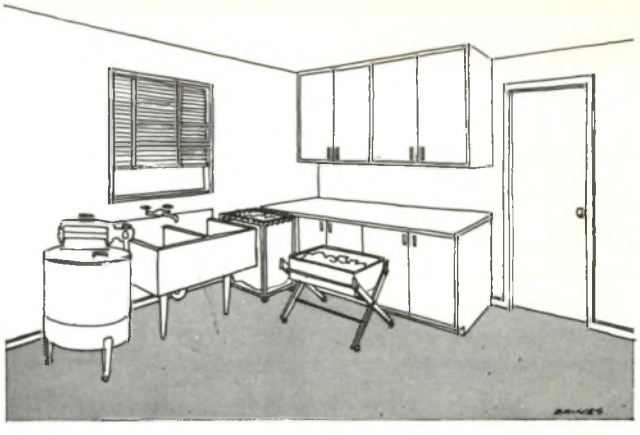
The Utility Room — A basementless house requires this separate working space. It is convenient because washing is done on the same level as outside drying and inside drying does not obstruct the kitchen.



Laundry equipment can be accommodated in the kitchen

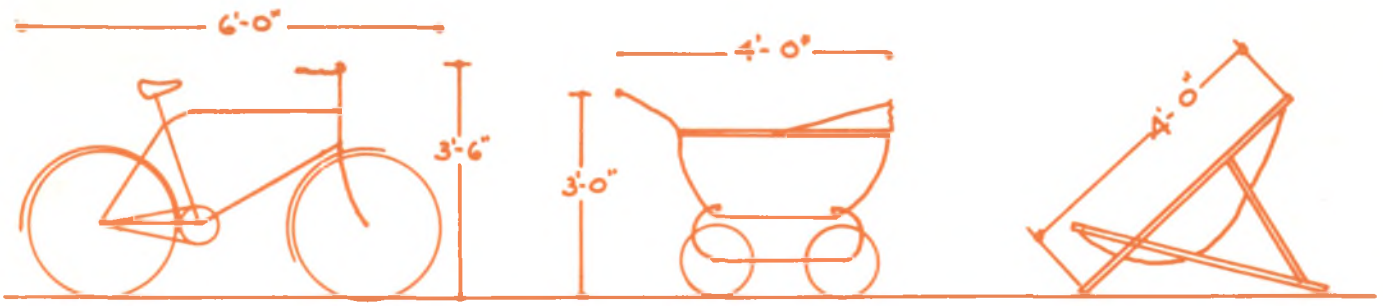


Basement stairs do not ease the task of laundering



Utility room laundries have advantages.

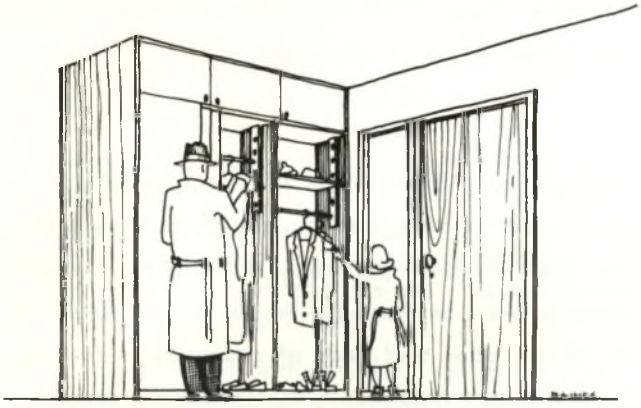
STORAGE



No house ever seems to have enough storage space. The future enjoyment of a home will greatly depend upon the time and money spent at the outset in organizing storage space for the miscellany of household possessions.

Here are some of the common items requiring storage so that they will be kept out of the way, in good condition and readily accessible.

Outdoor clothes. Hats, coats, shoes and rainy-weather garments should be kept in a closet near the front entrance. This must also be large enough to contain visitors' coats and hats.



Clothes. Each bedroom and each person requires a closet at least 2 feet deep and 3 feet wide. The rod in a man's closet should be 5' from the floor and, in a woman's closet, 5 feet 6 inches from the floor. Children's closets should have rods and hooks at convenient heights.

Seasonal Clothes. It is advisable to have a separate mothproof closet with hooks and a hanging rod 5 feet 6 inches from the floor, and with shelves for blankets and comforters.

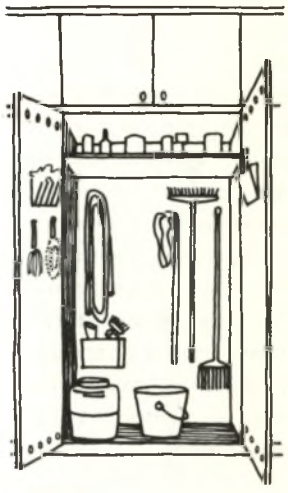
Linen. The cupboard should be adjacent to bedrooms and bathroom, should be at least 18 inches deep and should have various depths of shelf for varieties of linen to be stored.

Hobbies and Games. In or near the living room a general purpose closet is needed to contain miscellaneous items such as cameras and projector, paint-boxes, leather-work, scrapbooks and photo albums, typewriter, sewing basket, bridge-table, souvenirs and boxes of letters.

Toys. These may be stored in a child's bedroom if they are to be used most often there. The cupboard should be arranged so that the child will find it easiest to return toys to their proper place. Shelves should be open and low, and not too deep.

Sports Material. Fishing rods, rackets, skis etc., should be kept in a clean, dry place where they can easily be inspected and refurbished.

Cleaning Equipment. Vacuum cleaner, mop, brooms and dustpan, waxer and floor polisher need to be stored in a central position because they are used frequently in all parts of the house. A tall cupboard 2'6" deep and 4' wide is desirable.



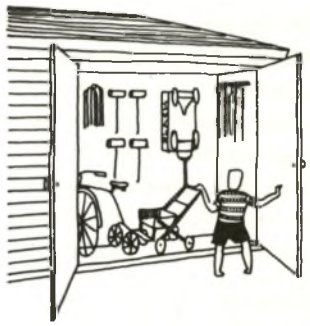
Storm Windows and Screens. These can be stored near the luggage or near the workshop, preferably off the ground on racks. Since they are moved twice a year this should be accomplished without disturbing other storage.

Luggage. Suitcases and bags should be stored on racks and shelves in a dry, well ventilated place.

Household Tools. These may be kept in a workshop area which may be basement or garage, or there may be a space provided for a handy tool box. Paints should be kept in a well ventilated, cool place where fumes cannot accumulate.

Garden Tools and Outdoor Furniture. These need not be stored in the heated area of the house and may be placed in the garage or porch, or in a separate outdoor locker. A considerable amount of space is required for lawnmower, garden hose, deck chairs, snow shovel, spade and fork, and children's outdoor play equipment.

Bicycles and Baby Carriage. These require special consideration so that they are easily accessible but protected from the weather.



Preserves. A cool place is required for cans and jars, also for wines, beer and liquors.

Dead Storage. Every household accumulates possessions that are not in current use such as baby equipment that has been put away but might be needed again, broken or worn-out furniture, andirons and old trunks, odds and ends of supposed sentimental interest. Space required varies with the age of the family and the size of the collection. Best thing to do is to get rid of it ruthlessly before you move into your new home.

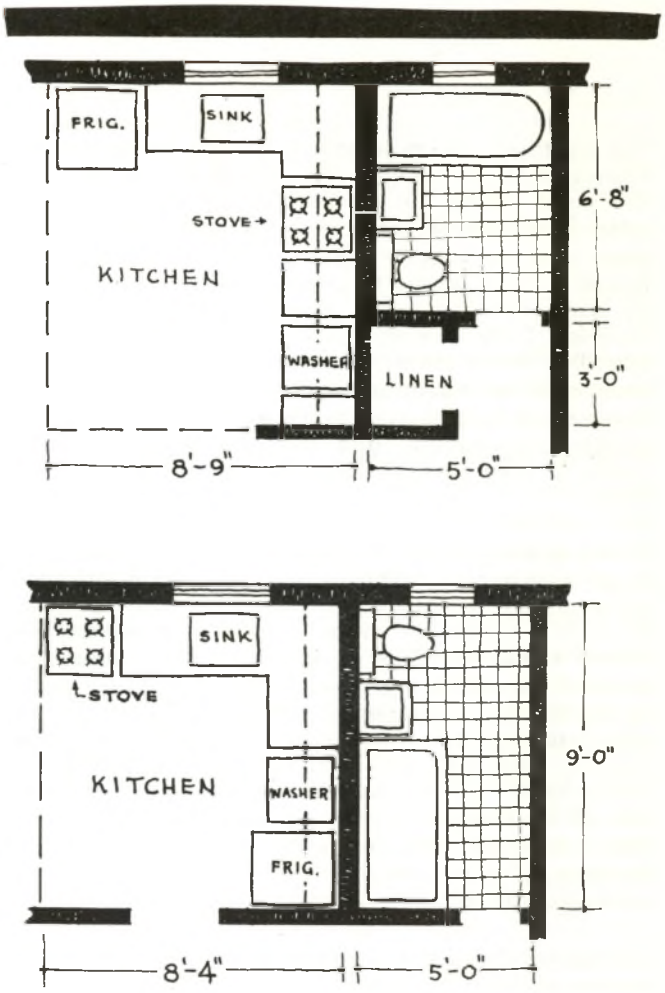
BATHROOM PLANNING

Economies in the labour and material of installation will be brought about if sanitary fixtures are grouped together and plumbing connections concentrated in one part of the house. However, such an arrangement may impose limitations on the location of the bathroom, kitchen and laundry to such an extent that the savings in installation costs have to be ignored. Nevertheless, in selecting a plan, it should be considered that the most efficient arrangement is to place the bathroom, kitchen and laundry either back to back or one above the other.

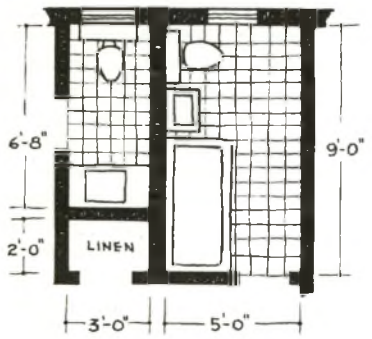
In houses with bedrooms on two floors—for example a storey-and-a-half home—it is desirable to install bathroom facilities on both floors. Also, where the family is a large one some duplication of bathroom facilities is desirable, although it is not necessary to duplicate all the fixtures. The most useful combination is to have a standard four-fixture bathroom supplemented elsewhere by a compartment containing an additional wash basin and toilet. By judicious planning it is usually possible to arrange the fixtures so that only one vent pipe and one soil pipe are necessary for the two sets of fixtures.

Various combination bathroom facilities are possible. Here are a few which permit doubling up of facilities in order to obtain the best use.

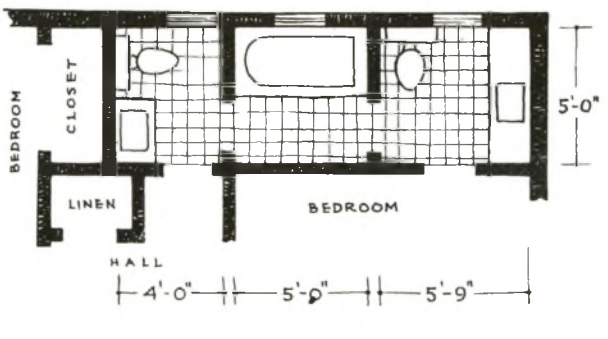
The main family bathroom should open off the private hall serving the bedrooms. This hall should be accessible to all parts of the house without an individual having to pass through any room—such as the living room—to reach it. In planning the main bathroom it is wise to assume that at some time or other it may have to accommodate a bathinette, receptacles for clean and dirty diapers and a child's toilet seat. Many people like to have room for a clothes hamper, bathroom stool and weigh scales as well.



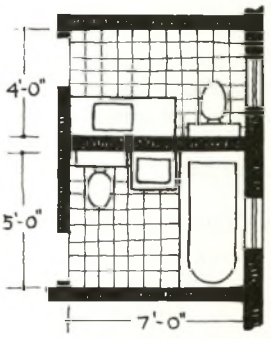
The placing of plumbing fixtures back to back along a common wall helps to reduce costs.



Vestibule powder room placed back to back with the family bathroom.



Two bathrooms, one opening directly off the master bedroom, in 77 square feet, with only five fixtures.



Doubled facilities in 67 square feet. A standard bathroom arrangement augmented by a smaller washroom.

ELECTRICITY

The electrical system installed in your home is most important to the general efficiency of the house. From the point where the current leaves the meter, the latter being the property of the company which supplies your current, the rest of the system within the house is your property. Many building codes and by-laws make frequent reference to the Canadian Electrical Code, one of whose primary objectives is to establish minimum standards for safe wiring. This code calls for adequate wiring required for safety. However, it is up to you, as the owner, to see that the system is adequate, and that provision has been made to take care of future demands as the need arises.

Electrical current flows into a home at full pressure, or voltage as it is called. It is carried along entrance wires or by a cable, depending on local custom, through a meter into what is called the **service entrance equipment**. This equipment is the distributing centre from which the flow of electricity to all parts of the house is controlled. It consists of a main switch and fuse box, or a main circuit breaker, and is the junction point from which the supply of current to the whole house can be switched on or off. Because our use of electricity is increasing with the passage of time it is advisable to design this equipment when the house is being built so that it will be large enough to accommodate an ever-increasing load.

Current is carried to the various parts of the house by means of **branch circuits.** There are three types of branch circuits, each designed to do a specific job and requiring a certain sized wire and fuse, or circuit breaker. Sometimes the fuses or circuit breakers for these branch circuits are in the same box as the main switch and fuses, or circuit breakers; sometimes they are housed in separate boxes. By counting the number of fuses in the box you can usually determine the number of branch circuits in a house. It is a wise precaution to provide more branch circuits than will immediately be put to use so that future electrical installations can be taken care of and the present circuits not overloaded by the acquisition of new equipment.

The three types of branch circuits are:

a. **General Purpose Circuits** for lighting, radio and small appliances throughout the house. A number 14 size wire requiring a 15 ampere fuse is normally used, although in some of the newer homes a number 12 wire is used in preference since it will carry a heavier load. Where a number 14 wire and 15 ampere fuse are used the circuit should not be loaded beyond 1500 watts. It is not difficult to count up the wattage output of any one circuit. Normally a maximum of 12 outlets are permitted on a general purpose circuit.

b. **Small Appliance Circuits** for appliances commonly used in the kitchen, laundry and dining areas. Such equipment as a coffee-maker, an iron, a toaster, a non-automatic washing machine, a refrigerator, etc., should be run off a small appliance circuit. It is undesirable to use less than a number 12 wire for these circuits. A number 12 wire takes a 20 ampere fuse and should not be loaded beyond 2300 watts.

c. **Individual or Private Circuits,** each circuit serving only one appliance such as a stove, a water heater, an automatic washing machine, an automatically controlled heating system, a tool bench, etc. Fuses for these circuits vary in sizes and shapes.

In order to get the best out of your electrical system, never overload the branch circuits. It is wiser to provide enough of these in the first instance. If your local electrical code permits it, you may wish to use a number 12 wire for general purpose circuits in preference to a number 14 wire. By so doing, the capacity of each circuit can be increased to 2300 watts. Never replace a 15 ampere fuse with a 20 ampere fuse in order to step up performance or to prevent fuses blowing. Fuses are meant to blow to warn you when a circuit is overloaded. By defeating this purpose you are creating a fire hazard. Without your knowledge the wires concealed within the walls may become overheated causing the insulation on them to become permanently damaged.

When planning the electrical system of a new home, you should discuss your present and future needs with your electrical contractor. You should make a list of **all** your present electrical appliances and any equipment you hope to get in the future. With a plan of the house in front of you, you should go over this list together, deciding in what locations you want to operate this equipment. Consider your electrical needs room by room. The arrangement of your furniture will dictate the location of some of the outlets. Make allowance for future changes in furniture arrangement. Consider the location of switches. Plan so that you can switch lights on ahead of you instead of having to stumble down halls and across rooms in the dark, fumbling for the switch. Consider the convenience of two-way switches. Outlets should be of the duplex or multiple type and some should be switch controlled.

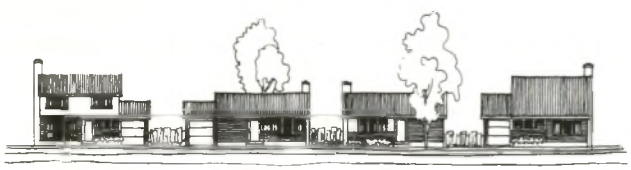
THE APPEARANCE OF YOUR HOUSE

A consideration of what your house should look like inevitably raises the question of the achitectural "styles".

Styles in architecture, like fashions in clothes, come into existence because the original models are admired and imitated. Hence we perpetuate such styles as Cape Cod, New England, Georgian, Elizabethan, Colonial, French Provincial, Western Ranch House, Quebec Farmhouse and others. These historical styles are often used in an attempt to capture some elusive quality of dignity and to make a house stand out and look different from its neighbours.

But imitation is not easy, particularly when the materials and shapes of modern houses are inevitably different from those used in the original models. When two or three different imitations of different styles are used on the same street, the effect is not one of dignity but of mediocrity and false imitation. There may be false shutters on one house and imitation stone-work on another. Some houses may have small leaded panes while others have large expanses of glass. Some may have unnecessary dormers and mock gables, while others use wrought-iron work and other copies of historical crafts. When these compete with one another to attract attention the whole effect is one of confusion. This is not the way to make a pleasant street.

The fact is that houses on a residential street are actually seen as a whole group and not as isolated buildings. The whole street scene depends upon the collective appearance of a number of houses.



A street assumes a restful, pleasant and dignified quality when the houses are of similar style and blend in well with one another. For this purpose the most effective designs are those which are free from useless ornament, are simple in shape, have clean lines, large unbroken surfaces covered by a single material and are austere in their use of materials, gay in their use of colour.

Therefore, when considering the exterior appearance of your house, think first of all of its general bulk and shape rather than of its details and ornaments. Choose a design that has simple lines and pleasant proportions of length, height and width. Consider how these proportions are accented by well designed windows and doors and how the shape is sharply defined by neat trim. Remember that fads and fancies do not remain in fashion very long. The resale value of your house will depend upon the lasting qualities of good simple proportions and good simple building.

If you have started by considering the plan of your house, recognizing your living requirements, then you may already have discovered that an historical style is not suitable. However keen you may be on Dutch Colonial, for instance, or the Cape Cod cottage you may have to recognize that such styles have limitations and impose restrictions on the plan. The best solution may be a house of contemporary design.

The historical styles evolved out of ways of living and methods of building in other times and places. Our own contemporary style is still in the process of evolution. Its character is a reflection of present-day living habits, expressing a love of the outdoors and a general informality.

Regional differences exist in Canada, yet the contemporary style has certain recognizable characteristics throughout. Large floor-to-ceiling windows, made possible by efficient modern heating, offer an easy transition between indoor and outdoor living areas. Low pitched, flat or shed roofs are used. The roof line is often projected over a carport and ex-

tended to give some shelter to the outdoor living area. We often see large wall expanses of pleasing colour and texture emphasizing the low rectangular shape of the building in the landscape.

A house looks best if it is set on the lot so that it "hugs the ground". The ground floor level should be brought as close as possible to the natural finished grade of the land. This requires a careful calculation of the amount of excavation material and how it can be placed so as to avoid the naked appearance of a house that has not been set deep enough in the ground. This is particularly important in the case of a narrow-fronted house. The basementless bungalow, with utility room on the ground floor, naturally sits low on the ground and its large expanse gives it the most desirable long proportions.

In the choice of materials there should be consideration of the cost of maintenance. A well-built house should require little maintenance during the first ten years of its life. But after this period of exposure to the weather some maintenance expenditures will be necessary. After 25 years this will be a major factor in the value of the property. Therefore, as a protection of the investment it is important to choose durable materials and simple forms of construction that will not invite the attacks of moisture and ice.

There is today a wide choice of exterior finishing materials. A good builder can advise as to the durability of materials and new products on the market. Roughly speaking, exterior finishing materials fall into two categories—those needing maintenance in the form of paint or stain every three to five years, and those needing little maintenance.

These need maintenance:

Wood siding—vertical or horizontal
or shingles
or plywood
Concrete or Cinder Block

These need very little maintenance:

Solid masonry
Masonry veneer—brick or stone
Aluminum siding
Asbestos cement shingles (if applied to a solid backing)
Stucco

Mortgage companies reckon the life of a house for mortgage purposes to be between thirty and fifty years. You will see fine stone houses which are obviously older than this still standing, but do not assume that solid masonry is the only sound method of building. Wood frame construction is equally sound, and with proper maintenance such a house will last beyond a lifetime.

The number of exterior finishes used on a house should be limited. Avoid changes of material on one surface just for the sake of variety. Finishes usually look better when used over large areas. It is largely the colour and the texture of exterior materials and their weathering qualities which give a house distinction and solidity.

Different kinds of colours have different effects. For instance, light colours make objects look larger and dark colours do the reverse. Very strong colours used over large surfaces will make an object stand out from its surroundings—sometimes uncomfortably so. Very bright colours should only be used on small areas which should be set off by larger areas of a more subdued hue. This helps to preserve the balance of a colour scheme. Bright colours should be reserved to accentuate features to which you want to draw attention. Unattractive features can be played down; direct attention away from them by painting them in subdued colour or the same colour that is used on the larger part of the dwelling.

Both texture and colour can be used to deceive the eye. Horizontal lines suggest width and vertical lines give the impression of greater height. An area of dark colour used above a lighter one will have the effect of reducing the height of the lighter colour. A dark roof helps to "tie" a house to the ground.

If your house is small, use only one colour on the walls, and a light colour, to give the illusion of greater size. It is always wise to limit the number of colours used on one facade. A large area of one colour looks better than a large area broken up into several colours.

There are two principal areas to be considered, the roof and the walls. The colours on these areas must not conflict and, if a coloured roof is used, this will limit the colours that can be used elsewhere. It is best to use a grey or natural colour roof so that this large expanse will not dominate any other colours used.

Climate and landscape may enter into the choice of colour and texture. In places where there are many overcast and rainy days, white surfaces and light, cheerful colours should be chosen to offset the depressing effect of the weather. Heavy and unusual colours need bright sunshine to give them sparkle. Where there are trees to give colour and texture to the scene, simple white surfaces provide interesting contrast. Where there are few trees, bright colours and interesting textured finishes can help to make up for their absence.

The colours used most successfully on the exterior of houses are the simple colours of the landscape—the colours of earth and stone and green trees. Reserve your interest in unusual and fashionable colours for interior decoration.

LANDSCAPING

The landscaping of your lot warrants as much thought and care as the planning of the house. The land on which the house is built represents between 10 and 15 per cent of the total investment. To set off and compliment the house you should be prepared to spend a further 3 or 4 per cent on landscaping. This will include the grading, the walks and drive and the development of the lot so that it becomes an inherent part of your family's living space.

The house and lot should be planned in relation with one another. The subsequent value, satisfaction and cost of maintenance will depend upon the installation of well designed and well built permanent features such as lawns, driveway and fences. If they are poorly constructed they will become shabby and rapidly deteriorate the value and use of the property.

Even the simplest garden requires continual care and maintenance. Though gardening may be your hobby, it is best to devise a simple design of permanent materials so that maintenance will not become an overwhelming responsibility.

Landscaping involves:

1. Preparing a basic design for the development of the lot—to be carried out over a period of two or three years.
2. Shaping the land in relation to the building and installing the permanent features of the scheme such as retaining walls, walks, lawn, driveway, terrace and fences or hedges.
3. Selecting and growing trees, shrubs and plants to fulfil the design.
4. Maintaining the lawns, garden and permanent features so as to keep the property in good order and obtain the full pleasure that the garden may provide for the whole family.

PLANNING

The following factors affect landscape planning:

1. **Shape of the Ground.** Where practicable, preserve and take advantage of natural features such as rock outcroppings, trees, uneven grades, etc. Although a flat or nearly level site is cheaper and easier to develop, a sloping lot offers a greater challenge to ingenuity and gives more interesting results. High land is preferable to low-lying ground on which water may lie in pockets and present a drainage problem.
2. **Environment.** You may be able to exploit the advantages of a well wooded locality, or there may be a fine view of which you can take advantage.
3. **Climate.** In most parts of Canada our opportunity for enjoying outdoor living is limited to about 4 months of the year and we must make the best of this short time. Plan a terrace or porch in a sunny spot, sheltered from the wind, so that it can be used early in spring and late in the fall. In a garden with a southern exposure and plenty of sun, spring flowers will bloom two or three weeks ahead of areas with a northern exposure.
4. **House Plan.** The views from windows and the means of access to the garden will largely determine its layout. The smaller the house, the greater the need for careful planning because every inch must count.
5. **Family.** If the principal use of the garden is to be a playground for the children, it will have to be planned differently from a garden which is to be primarily for the hobby of horticulture.

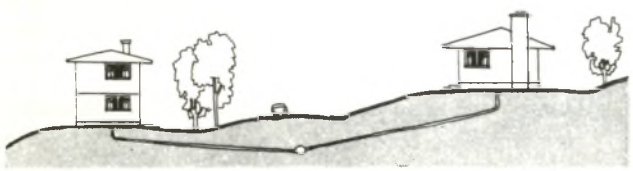
CONSTRUCTING

Before the detailed design of a garden can be carried out it is necessary to shape the ground and provide a permanent surface that will withstand the run-off of water and melting snow. This is the stable foundation on which a garden is based.

STREET AND LOT LEVELS

Where the street runs at right angles to the contour lines the lot may have to be terraced. Exercise care in grading the lot in order that surface water drains away from the side yards.

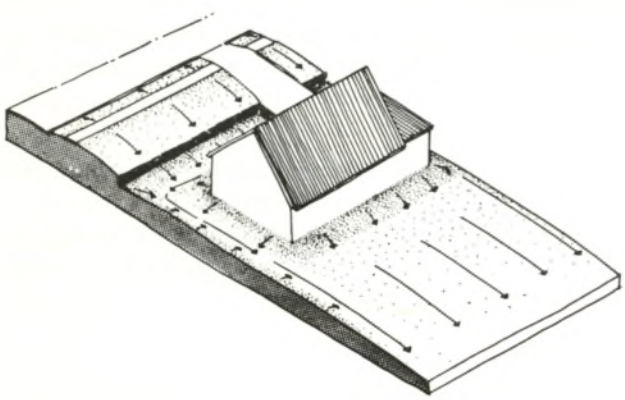
If the road runs parallel with the contours, it is possible that the slope may be such that the houses on one side of the street are on lots well above the established grade level and those on the opposite side are on lots lower than the established grade. An established grade level for the crown of the road is set by the city engineer's office. Check to make sure that the existing road is at this level. If not, find out what the level will be and plan your own finished lot grades accordingly. This is most important.



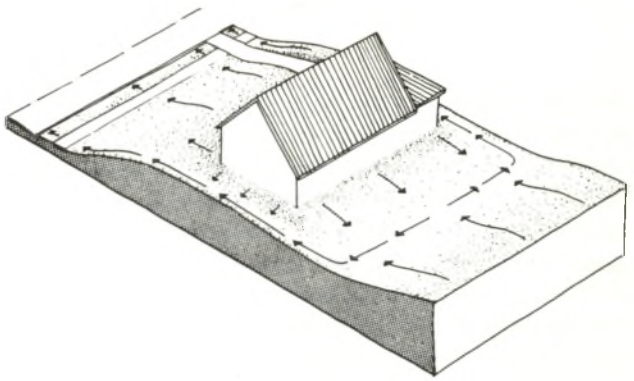
GRADING AND DRAINAGE

Whatever may be the site conditions and the length of time for carrying out the construction plan, the most important task in preparing a site is to establish final finished grade levels on the lot in relation with the house, the street and the adjacent lots.

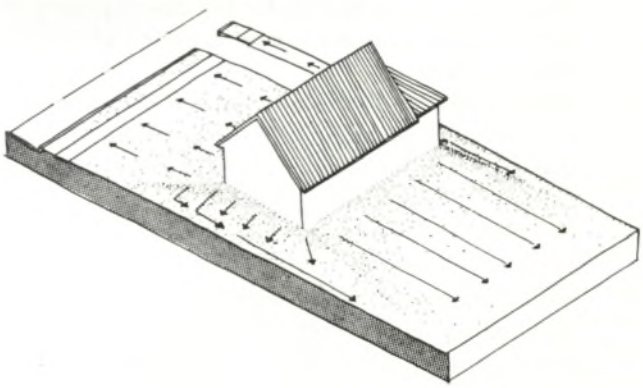
It is necessary to direct surface water away from the building. For this reason the finished grade must be sloped down and away from the base of the building. Extra backfill should be provided for use close to the basement walls because the backfill will settle at this point.



The house which is on a lot lower than the established grade presents the greatest problems. The connection to the sewer may be a critical matter. Extra fill may have to be used in order to enable surface drainage to be directed into the street. Or, failing this, the surface drainage may have to be directed to the rear of the lot. Where finished grade levels meet a reverse slope, the bottom of the swale or valley formed by the two slopes should be at least 8" below the level at the base of the building, and if possible at least 10 feet away from the basement walls. In extreme circumstances where there is inadequate surface drainage on the lot a catch basin may have to be installed.



A house on a lot which is higher than the surrounding levels needs careful treatment in order to make it tie in with the surrounding landscape. If the lot elevation is well above the street, the house should be set well back so that there is a large flat area surrounding the foundation (10'-12' in front and 4'-8' on the side yards as lot lines permit) and then a reasonable grade to the street. This will help to give the house an appearance of stability and permanence, which may be accentuated by making the outside grade as close as possible to the top of the basement walls, or the ground floor. The house should appear to "hug" the ground.



A lot which is flat, or almost level, is easier to develop than those described above and will usually be less expensive. In order to drain the front area of the lot, the ground should slope gently to the street with a fall of about 1" in 5 or 6 feet so that surface water will flow over the sidewalks into the gutter. Backyard surface water may be drained either to the rear of the property if natural drainage exists in that direction or by directing the flow along a narrow swale or valley via the side of the house out to the street.

TOPSOIL

Save the topsoil on your lot. Purchasing new topsoil for a 60′ x 100′ lot and the area between the property line and the street may cost about $125. Stripping and replacing the topsoil already there should not cost more than $25. Save the top 5-6″ of soil and have it pushed to one side of the site to be spread after the final grading is done. If you wish to have it analyzed in order to establish its fertility quality, send a sample to the nearest Provincial Department of Agriculture and seek their recommendations before stripping it off the lot. You may have to enrich it.

TREES

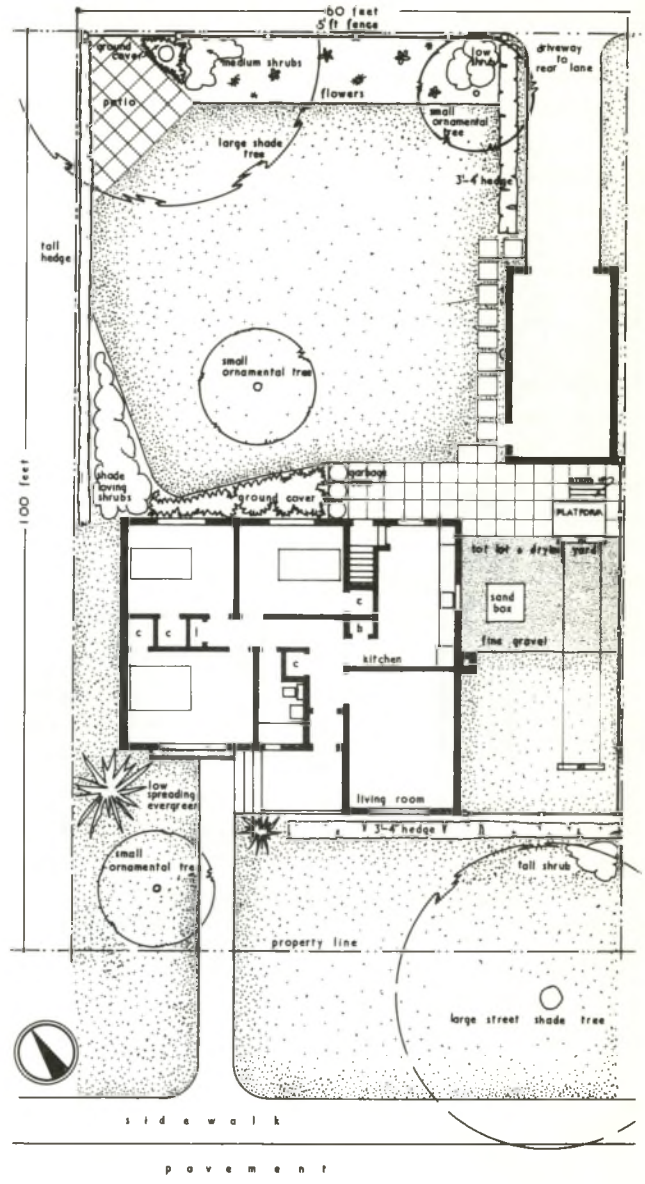
If you are fortunate enough to have a lot with trees already growing on it, select those you wish to retain before commencing building operations. Careful consideration should be given to the locations and full-grown sizes of these trees. It is unwise to retain trees too close to the house. At least 10′ away is recommended for a large shade tree.

Protect the existing trees on your lot from damage during construction. This can be done by building a temporary barricade around each one. Alternatively, the land which is unnecessary to the builder's operations can be fenced off. The latter is good practice anyway.

If you buy a lot which is treeless, it will be worthwhile importing a 20′ tall tree to produce immediate shade. Such a tree may cost as much as $125 but it will immediately be an asset to your property.

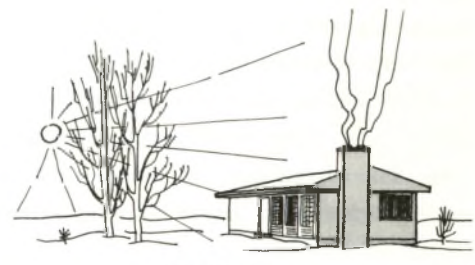
In selecting trees for planting avoid those which seed profusely such as chestnut, silver maple and tree-of-heaven, because the seedlings have to be destroyed continually. Avoid planting poplars close to the house. They are nice to look at but their roots spread and make it difficult to grow other plants in their vicinity. Coniferous trees provide a permanent windbreak to cut winter wind velocities and may reduce fuel consumption.

Too many trees on a lot provide dense shade and discourage the growth of grass and plants. Only a few ground cover plants such as Periwinkle and Japanese spurge will thrive in deep shade. On the other hand, it is desirable to introduce a reasonable amount of shade in order to protect the house from the sun's hottest rays during the summer. Trees are natural air conditioners because they absorb the sun's heat. In the winter when the leaves are off the deciduous trees the sun's rays can reach the dwelling.

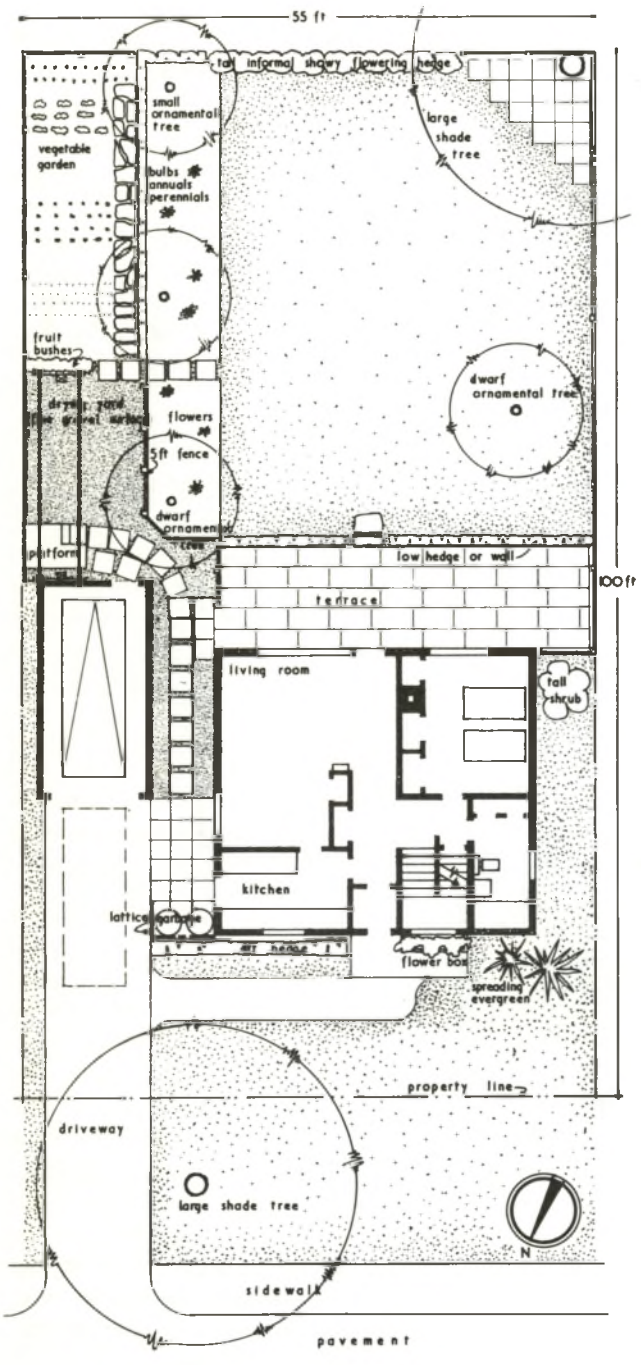


This landscaping layout is designed to fit a house plan where the living room overlooks the street, and where access to the service door at the rear of the house and to the garage is from a lane.

SUMMER

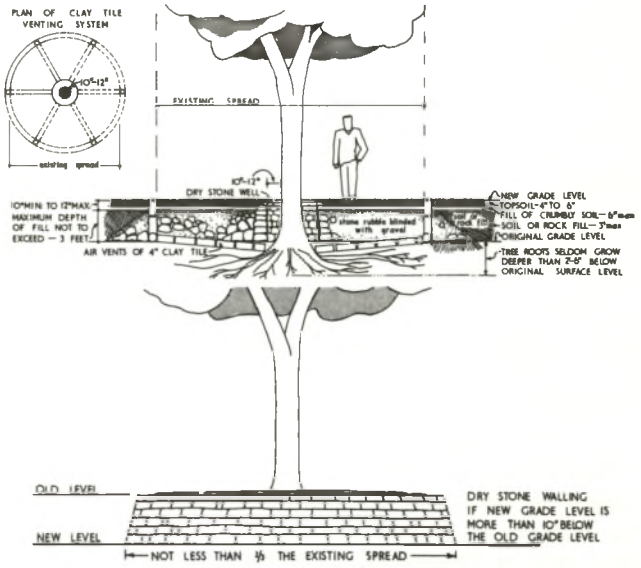


WINTER



The plan illustrated above and that on the previous page suggest methods of developing two different but very common landscaping situations. Both plans include similar elements and show how to plan the lot so as to create maximum privacy and spaciousness. The plan above has the living room overlooking the rear garden, with access from the street via the drive.

If the finished grade level is going to be appreciably changed from the original level, protect existing trees on the lot, since a change in level of as little as 8" either up or down can kill a growing tree. Where possible, keep the soil surface around the tree at its original level as shown in the drawings below. It is wise to consult a landscape expert when this problem is encountered.



Tree roots tend to find their way into nearby drains. Consideration should be given to using piping that is jointed to withstand tree roots when drains must be located near trees.

THE BACK GARDEN

This part of the lot should provide the privacy of a family living area as well as other practical uses. On the plan of the lot areas should be allocated for the following purposes:

1. **A terrace or patio** for outdoor living should open off the living room. If necessary this should be screened from cold winds and undesirable views. It may be partly roofed over, depending on its size and location. It should have good drainage and flat paving is desirable for setting garden furniture.

2. **A service area or yard** should be located close to the kitchen, rear entrance or garage. This is the outdoor work centre. It should provide space and equipment for clothes drying. There should be a covered container for garbage cans so that they will be accessible but out of sight. Garden tools should be stored near by. Deliveries to the rear entrance might be made through this yard. Good drainage and a flat, hard surface are desirable. It should be accessible by path from

both the front and the back gardens. The service yard can be screened from the rest of the garden and road either by fences or hedges.

3. **A play area** for small children should be within close view and range of the house. A low fence may be necessary to provide protection. There should be partial shade provided by trees or sunshade.
4. **The garden itself** may consist of lawn, flower beds and vegetable garden. A broad and simple design will give the greatest effect of space. Lawns which are cut up with small or ornate beds are laborious to maintain and minimize the space. On the other hand a garden which is divided in two or three parts by changes of level and well placed trees and shrubs will have greater interest and individuality than one which is simply a rectangular yard formed by the lot lines. It must be realized that if the garden does not have at least 5 inches of topsoil nothing but weeds can be grown successfully.

LAWN SEEDING

In seeding a lawn, the following steps should be observed:

Since the fall is nature's own sowing time, seeding should be done preferably in the fall between the 15th August and 15th September, or alternatively, after the spring frosts when the earth is workable and crumbly.

The sub-grade should first have been loosened up to a depth of 4" or 5", either by digging or with a hand cultivator. In the Atlantic provinces and the coastal areas of British Columbia only 4" of topsoil is necessary. Elsewhere in Canada at least 5" of topsoil should be used. Where water is not available for maintenance greater depth of topsoil should be used. After evenly spreading the topsoil, a commercial fertilizer should be well mixed in with it at the rate of 20 to 30 lbs. per 1,000 square feet. After fertilizing, the surface should be hand-raked, or better still, dragged with a 4 ft. x 4 ft. steel door mat which will provide a fine even grade to receive the seed. To ensure good drainage, a grade of 1 inch in 5 feet should be established.

Use a seed mixture which is known to be successful in your locality. It usually pays to buy the better quality seed. Use 4 to 5 lbs. per 1,000 square feet. The fertilizer and the seed should both be spread in the same manner. Divide the quantity to be used in half, spread one half evenly in one direction in strips 4 ft. to 5 ft. wide, and then do the same with the remainder but at right angles to the original direction.

Rake the seeded area gently to incorporate the seed with the soil, again in 2 directions at right angles to each other. Then, provided the soil is dry, roll the area with a lawn roller. Finally, sprinkle the area with a fine spray to a penetration depth of about 1" and fence it off.

Keep a new lawn moist during germination and during preliminary growth until it has reached a height of 2½", when it should be mown. Thereafter it should be maintained at not less than 1½"-2" high. This encourages luxuriant growth and discourages weeds. Established lawns should be watered as little as possible, but if they become dry they should be thoroughly soaked to a depth of 6". Semi-annual fertilizing in spring and fall is desirable, using a commercial fertilizer at the rates recommended by the manufacturer.

LAWN SODDING

Where there are small children or wherever a lawn is needed with some urgency, sod may be used. This may cost from 30 to 40 cents per sq. yd. if laid by the owner and 50 cents per sq. yd. if laid by a sodding contractor.

Prepare the area to be sodded the same way as for sowing lawn seed; however, only 3" of topsoil is needed. Fertilizer should be used and in the same amounts as for seeding, except that 50% of the total amount should be evenly scattered over the area to be sodded immediately before sodding is done. The remainder is used later. Buy your sod from a reliable source and check it first for weeds. Individual sods should be 1½" thick and the grass should be 2" long. Sods should be cut in 12" strips or 12" squares. After laying, sods should be watered immediately and extensively to ensure a moisture penetration of 4-5 inches through sod, soil and into subsoil.

After drying out to a point where the fibres will not be damaged, the newly laid sods should be rolled and tamped to provide a uniform surface. Then spread the remainder of the fertilizer over the sodded area.

When graded slopes are greater than 12" in 5' or 12" in 4', sod should always be used in preference to seeding. Start to lay the sod from the bottom of the slope working upwards to the top. Use a roller or a tamper to provide a uniform surface. If the slope is very steep, the sod may have to be pegged to prevent it from slipping.

WALKS AND DRIVES

Walks should be straight and should have a smooth surface of either asphalt or concrete over a foundation of gravel. The width of walks will vary with their length. Where the run is short, a walk that is 3'-6" wide will look in scale with the rest of the landscaping. However, if the walk is a long, straight one you may find it necessary to increase the width to about 4'-6" to avoid a mean appearance. Both walks and driveways should be designed so that their finished surface is 1½" above the surrounding graded topsoil. Then when the grass grows both walks and grass surfaces will be more or less level in appearance. Walks and drives should have a minimum slope of at least ¾" in 10' to ensure good drainage. A slope greater than 7" in 10' will cause an ice hazard in wintertime, although with the aid of sodium chloride and similar compounds, icing becomes less of a problem, particularly on asphalt surfaces which can absorb some of the sun's heat.

Driveways need to be 10' wide, of asphalt or concrete, and graded as above. Avoid long, steeply sloping, or curved driveways.

VEGETABLE GARDEN

Although the area available for growing vegetables is usually small, this provides an interesting hobby. It must receive plenty of afternoon sun. Raspberry canes or grape vines on a trellis could be used to divide this patch from the lawn. Neither type of plant is expensive. With raspberry canes, at least 12 bushes are necessary, more are desirable. Grape vines should be planted 7 to 10' apart along the length of a 5' high three-wire trellis. Lettuce can be planted as soon as the frost is out of the ground, radishes and green onions a little later. Chives and herbs do well, as do root vegetables and tomato plants. It is surprising how much rhubarb can be got from two clumps and they need little care. Other useful home-grown vegetables are green peas, beans, beets, spinach, cauliflower and sprouts.

FLOWER GARDEN

Flowering plants are best placed where they decorate the front approach to the house and where they can be seen from indoors. Their colour is most effective when plants of the same kind are massed rather than intermingled.

As a simple beginning to the development of perennial borders select five or six types of plant which flower at different times and plant these in clumps of about a dozen. Additional varieties can be added as you gain experience. Spring bulbs can be placed in *random clumps in beds and in the grass.* Annuals provide colour and gaiety to a garden which has not yet fully developed its permanent planting of shrubs and perennials; these bloom through the summer and often until the first frost comes.

The following plants are those most successfully used in Canadian gardens, the perennials being in the order of flowering. The taller plants should be placed at the back of flower beds.

List of Ten Good Hardy Perennials
for starting a border—in order of flowering
(Medium to tall plants)

Bleeding Heart
Columbine
Iris
Peony
Day Lily
Globe-Flower
Delphinium
Phlox
Hollyhock
Chrysanthemum

List of Ten Good Annuals

Sweet Alyssum	low
Petunia	"
Viola	"
Dimorphotheca	medium
Salvia	"
Snapdragon	"
Marigold	"
Zinnia	tall
Aster	"
Annual Phlox	"

List of Ten Bulbs

Scilla	low	Spring
Chionodoxa	"	"
Snowdrop	"	"
Crocus	"	"
Hyacinth	medium	"
Daffodil & Narcissus	"	"
Tulip	"	"
Tuberous Begonia	"	Summer
Gladiolus	tall	"
Dahlia	"	"

TREES and SHRUBS

* H—Hedging material, must be pruned.
x—Good fall colour (leaves and/or fruit).
o—Tolerates partial shade.
F—Showy flowers.
?—May be attacked by insects or disease.

	Approx. Height in feet	Shape	Growth	Traits *	Remarks
LARGE TREES					
Sugar Maple	70-100	Ascending	Medium	x	Good general use tree. Creates dense shade.
Silver Maple	70-100	Spreading	Fast	x	Good for rear gardens only. Not a lawn tree. Weak at stem branches.
Red Oak	50- 80	Dome	Medium	x	Good general use tree for Ontario and east to coast. Very colourful in Fall. Needs expert planting care.
Pin Oak	50- 60	Conical	Medium	x	Good general use tree. Does not have large spread.
American Elm	70-100	Vase	Fast	?	In view of prevalence of Dutch Elm disease it is recommended they be planted at least 75' apart.
Small-leaf Linden	40- 50	Oblong	Medium	F	Graceful with small leaves. Has short trunk. General purpose tree.
Weeping Willow	40- 60	Pendulous	Fast		A specimen tree, graceful in appearance. Overpowering on small lot.
Green Ash	50- 60	Oblong	Medium		Useful for defining front lot line, and for placing close to building. Does not have large spread.
Lombardy Poplar	75-100	Columnar	Fast	?	Useful as a windbreak and screen, and also as accent in the garden.
Moraine Locust	40- 50	Conical	Fast	F	Becoming increasingly popular as a medium, upright shade tree. Suitable on small lot.
Catalpa	40- 50	Ascending	Fast	F	Specimen tree. Profuse flowers, large heart-shaped leaves and cigar-shaped pods. Not recommended for Prairies.
Evergreens					
White Spruce	60- 70	Conical	Medium	H	Handsome ornamental evergreen. Those which have a bluish tinge are known as Blue Spruce.
Scotch Pine	50- 60	Oval	Fast		Handsome ornamental evergreen. Good windbreak. When old has colourful red bark.
Austrian Pine	50- 60	Oval	Medium		Handsome ornamental evergreen. Good windbreak. Foliage full to the ground.
SMALL ORNAMENTAL TREES					
Flowering Crab	15- 30	Round	Medium	x F	Specimen tree. Very showy flowers varying from white to red. Fruit is edible. Check for varieties hardy in your locality.
Paul's Scarlet Hawthorn	15- 30	Dome	Slow	x F ?	Specimen tree. Recommended only in Maritimes, Southern Ontario and West Coast.
Ginnala Maple	15- 30	Spreading	Medium	x	Specimen tree or shrub according to pruning. Leaves colourful in Fall.
Flowering Plum	15- 30	Ascending	Slow	x F	Specimen tree. Pink flowers and small fruit. Purple-leafed variety even more colourful.
Russian Olive	15- 30	Irregular	Fast	x F	Attractive specimen tree with silvery yellow flowers and small green-grey leaves, silvery beneath.
Mountain Ash	15- 45	Spreading	Medium	x	Specimen tree, showy in Fall with bright orange berries. Not a long-lived tree (30 years).
BIG SHRUBS (Need sensible pruning)					
Elder	4- 8	Bushy	Fast	x	Coarse stemmed but has showy, attractive feathering leaves. White flowers and edible black berries.
Viburnums	2- 15	Various		x o F ?	Wide range of varieties to choose from, all good. Does well in all locations.
Spireas	2- 6	Various	Medium	x o F	Good in all types of locations.
Lilacs	6- 15	Erect, bushy	Medium	H F ?	Indispensable and hardy. Very fragrant white, pink or purple coloured flowers.
Mockorange	4- 12	Spreading	Fast	H o F	There are many varieties. Hardy with fragrant white flowers.
Privet	5- 6	Bushy	Fast	H o	Good for hedging. Not too hardy at Ottawa latitudes and in Prairies.
Ninebark	6- 10	Spreading	Fast	o	Good background shrub. The bark peels, giving a raggy but attractive effect.
Honeysuckle	4- 10	Spreading	Fast	o F	An all-purpose shrub.
Chinese Elm	Various	Upright	Fast	H	Can be used as a 25-50 ft. high tree. Has a short life. Can also be used for hedging but must be pruned 3 times a year, otherwise becomes leggy.
Caragana (Russian Pea Shrub)	4- 6	Erect	Medium	H o	Small variety is excellent for low hedge; large variety is leggy and needs drastic pruning.
Roses	2- 10	Erect and spreading	Fast	x F ?	Many lovely fragrant species. Bushes are thorny. Check the hardiness of individual species.
Cotoneaster	1- 6	Various	Slow	x ?	Many fine varieties suitable for rockeries and shrub borders.
Hydrangea	2- 8	Spreading	Fast	x o F	Snowball variety flowers in Summer, P.G. variety (pink flowers) in Fall. Very showy.
Forsythia	4- 6	Spreading	Medium	o F	Wonderful spring showing of yellow flowers. Check for hardiness in your locality.
Euonymous	1- 15	Various	Medium	x o	There are many varieties. The fruits are small, colourful capsules, pink and orange or red in colour.
Evergreens					
Japanese Yew	2- 15	Various	Slow	H o	Indispensable. Many varieties. It is the best foundation planting. Will thrive both in shade and under city conditions. Can be clipped to shape.
Junipers	1- 30	Various	Slow		Many varieties, both prostrate and upright. Needs sunlight.
White Cedar	1 upwards	Various	Slow	H	Many varieties. Needs sun. Can be trimmed. Useful as a windbreak, and for foundation planting and hedges.
LITTLE SHRUBS (Need sensible pruning)					
Japanese Quince	2- 4	Bushy	Slow	x F ?	Colourful in spring. Shades of pink and orange. Fruit is edible. Check its hardiness.
Alpine Currant	2- 4	Bushy	Medium	H o F	Good, hardy all-round shrub with yellow flowers. Excellent for low hedges.
Barberry	2- 4	Bushy	Medium	H x o	Hardy species. Useful for foundation planting, low clipped hedges and in shrub borders. Spiny and colourful.
Evergreens					
Mugho Pine	3- 15	Round	Slow		Needs sun. Hardy. Can either be trimmed and kept formal or allowed to develop.
Mahonia	2- 3	Spreading	Medium	x o F	Also known as Oregon Grape. Has yellow flowers and holly-like leaves. Check for hardiness.
Korean Boxwood	1- 2	Dense	Slow	H	Excellent as low hedging material. Check for hardiness.
VINES AND GROUND COVERS					
Hall's Honeysuckle				x o F	A trailing vine. Can also be used as a climber. Not too hardy.
Engelmann's Ivy			Fast	x o	A hardy clinging type of ivy, also known as Virginia Creeper. Suitable for stone or brick surfaces and also for covering banks.
Boston Ivy			Fast	x	Smaller leaf than Engelmann's Ivy. Recommended only in Maritimes, Southern Ontario and the West Coast.
Dutchman's Pipe			Fast	o F	Small pipe-shaped flowers and large, deep green, elephant ear-shaped leaves.
Evergreens					
Winter Creeper (Euonymous)		Dense and spreading	Slow	o	Several varieties. May also be grown as bushes. Check its hardiness.
Periwinkle			Fast	o F	Excellent ground cover with a small, blue flower in spring. Suitable in shady locations where grass will not grow.
Japanese Spurge			Medium	o	Trailing. More upright in stature than periwinkle. Suitable in shady locations where grass will not grow.

A NATIONAL HOUSING ACT LOAN

The ideal way to get a house is, of course, to go to an architect, tell him what you want and what the needs of your family are, and get him to design a home especially for you. Such a course of action can be pursued under the NHA. There are, however, various other ways of getting your home built under NHA.

You can, for instance, go to a contractor and make arrangements with him to build a house for you of your choice. You will acquire a lot and make arrangements for an NHA loan. The approved lender will make advances to you on the loan as the building proceeds (except where a "completion loan" has been arranged), and you will pay your contractor according to the agreement you have made with him. Often this agreement specifies that payments be in the form of progress advances payable by you to your contractor at stated intervals of construction as the building work proceeds, and normally they can be satisfactorily worked out and arranged on the basis of the mortgage advances from your approved lender. You should most carefully consider and detail the timing of personal funds over and above the mortgage advances which you will pay out to the contractor. Sometimes interim financing is necessary to carry you through the initial stages of building. It is, however, most desirable that you do not commit yourself to payments you cannot subsequently meet; and while it is important to keep money flowing to the contractor, it is unnecessary, and sometimes disastrous, to advance moneys which exceed the value of the work completed at any stage of construction.

Another method of acquiring a house is to approach a builder who is constructing houses for sale under the National Housing Act on land which he himself owns. He differs from a contractor in that the latter contracts with you to build your house for you on land which you already own.

Should the builder have a house which you like, in a neighbourhood which you like, and at a price which suits your pocket book, then you will be a happy buyer. The builder can make arrangements to have the mortgage transferred to your name. Your down payment will be the difference between the amount of the purchase price and the amount of the loan. The approved lender through which the loan was originally made should be consulted by the prospective buyer concerning the terms of the mortgage. They will give advice on the transaction, but you would be wise to have a lawyer handle it. Also, the buyer should thoroughly inspect the house before closing the transaction, and make firm arrangements with the builder for the latter to make good any deficiencies or adjustments which may be necessary or required.

Still another method of getting a house built under NHA is for **the owner to do his own contracting.** The approved lender may or may not grant a loan on this basis. Their decision will be made on an estimate of your ability, financial and otherwise, to complete the transaction satisfactorily. They will have to be convinced that you have the necessary "know-how". Being your own contractor takes a lot of hard work, time, organizing ability and a knowledge of the building industry not possessed by the average layman. This is why many people are prepared to pay a reputable contractor a profit and let him do the job.

As your own contractor you will have to make your own arrangements to buy and have delivered at the right time the correct quantities and varieties of materials and equipment needed. You have to hire sub-contractors for such work as carpentry, plastering,

concrete, electrical work, plumbing, etc., and to see the various building operations are carried out according to your specifications and the National Housing Act building standards, in proper sequence and within a reasonable time.

You will be responsible for arrangements for sewer, water and hydro connections and for your own accounting. Possibly you may wish to do some of the labour yourself.

By these means savings can be effected; but before embarking on the undertaking you should be honestly satisfied of your own competence for the task, and for sound judgement of the quality of the materials to be used—also, that you have the time to make your competence count. It may be more economical to employ your time otherwise and let the experts build your home—even at apparently higher cost.

If the house is to be financed out of income, it should not cost more than about two and a half times your gross annual income. Normally people cannot afford to pay more than 27% of their gross monthly income for monthly mortgage payments and taxes.

BUILDING A HOUSE WITH A CONTRACTOR.

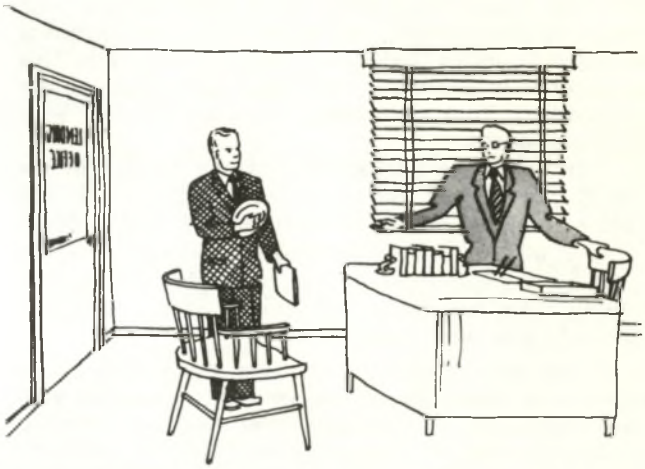
If you decide to build by getting a contractor to look after the construction for you and with the financial assistance of a National Housing Act loan, here is what you do:

1 Apply to the local office of the Central Mortgage and Housing Corporation and ask them for literature and booklets about house planning, together with a list of approved lenders. These approved lenders consist of life insurance companies, trust or loan companies and banks.

2 Choose from this list an approved lender in your locality and consult them.

3 Outline your tentative plans to them. This discussion will help you to clarify your ideas, to establish roughly how much financial assistance you are going to need and to what extent you may have to modify your ideas.

4 The approved lender will, in turn, offer sound advice about your proposals, not only about the house plans and construction but also on the advisability of buying the lot you have in mind. They will suggest ways of effecting savings should the necessity arise and they will also give you a rough indication of how large a loan you may hope to get.



During your preliminary talks with the approved lender neither side enters into any binding agreement with the other.

5 You are now in possession of certain facts and figures regarding your house building operation. You should now choose a contractor and discuss an agreement with him. If you do not have one in mind the approved lender may be able to help you. A contractor who is an efficient operator with a low overhead will save you money. You should have a written contract with this builder in which you set out the following: an agreed price and a method of payment, a specified period for completion, working drawings and specifications, rights and responsibilities of both parties, guarantee bonds, methods of settlement for incomplete or unsatisfactory work, who will pay for fire insurance and liability insurance, protection of property and any other details you wish to have covered. It should be borne in mind that CMHC and the approved lender are in no way responsible for any arrangements made between you and your contractor. It would, however, be unwise to proceed without a contract which covers the above points.

6 If you do not already own a lot you should choose one and take out an option on it, first having discussed the advisability of buying it with your approved lender. While it is unnecessary actually to have the title deeds to a lot before your application for a loan is approved, approval is granted on the understanding that you will be building on a specific site. Hence the advisability of taking out an option on an unbought lot. You must own the lot before actual construction starts. You will need the services of a lawyer to handle this transaction for you.

7 The next step is to make a formal application to the approved lender for a loan under the terms of the National Housing Act. To do this you pay a standard application fee and submit application forms together with the plans of your proposed house and lot. These house plans are in the form of working drawings and must be accompanied by a set of specifications. Your contractor or architect will be able to help you complete these documents, which must comply with "Housing Standards", published by the National Research Council's Division of Building Research. This publication is available from any local office of the Corporation. Your contractor should be familiar with these standards.

8 If you have chosen one of the houses in the CMHC publication "Small House Designs", you can obtain working drawings through any CMHC office.

Any minor changes to these working drawings must be marked right on the blueprints before submitting them for the loan approval. Your contractor can help you with these changes.

If, however, you wish to make more than minor changes to CMHC designs or you wish to design your own home, you should have other working drawings made. So long as your building conforms with the standards of construction laid down in NHA building standards and with your local by-laws, you may build to any design you wish. Only make sure whoever makes your working drawings for you is familiar with these standards and by-laws.

You may wish to have a design prepared specially to meet your needs rather than make use of an existing design published by CMHC. In this case you should seek the advice of an architect. His services will save you many a headache and ensure you get the most for each dollar spent. His training has equipped him to be not only a house designer but also able to draw up the specifications, to insist that the construction be carried out accordingly and as you desire, to act as your agent in dealing with the contractor and to advise you on certain legal aspects, lacking knowledge of which might cause you embarrassment. This does not mean that he will save you the services of a lawyer. You will need a lawyer's services in any event, whether building or buying, but your architect's advice and services will give you the assurance of having your building looked after by a competent authority and his inspections will more than justify his fee. He is, in fact, safeguarding your investment.

9 When the loan is approved you must send the title deeds of the lot (which means that if you have not yet bought it, you must now do so) to the solicitor employed by the approved lender so that he may prepare and register a mortgage deed for the number of years agreed upon by both you and the lender. Normally the length of the term is 25 years but this may be reduced should you wish it. In some cases the lender may agree to a 35-year term.

10 It will be necessary for you to reach an agreement with your building contractor on the price of your house before your loan application is submitted.

The contractor will be required to sign the application. It is neither necessary nor advisable that your contract be signed until the loan is approved. This should be attended to, however, as soon as possible after the approval is obtained. Unless you are well versed in the law of contracts and the practices of the construction industry, the services of a lawyer in the preparation and signing of this contract will be necessary to protect your interests and to avoid future misunderstandings with the builder.

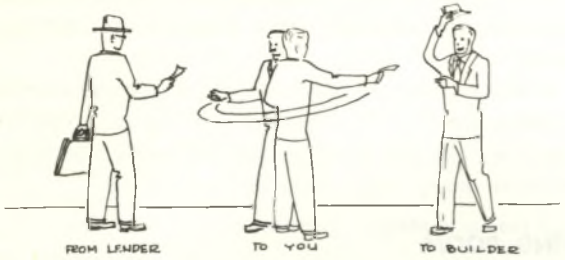
The contract should specify in detail the work to be done by the builder, the date it is to be completed, the plans and specifications to be followed in the performance of the work, the price to be paid for it and the times at which payments are to be made.

The contract should be so drawn to protect you against claims under the Mechanics' Lien Act of the province in which you are building. Although provincial laws in this respect vary, in all cases workmen, suppliers of materials, subcontractors and contractors are given a lien right against the land for which they have supplied work or material. If they have not been paid, they may have the right to sell the land and to retain from the sale price enough money to pay their and other similar unpaid accounts. Thus, if your contractor neglects to pay his workmen, you may be required, unless you take adequate steps for your protection, to make the payments to them, notwithstanding the fact that you have already paid the full contract price to the contractor. Your contract with the builder, therefore, should make provision for the retention of an adequate portion of the contract price until all lien rights against the property have expired or proof has been given by the contractor that all his outstanding accounts have been paid. The portion of the contract price to be retained will vary in different provinces but usually the holdback is at least 20%.

In some cases, the approved lender in advancing the mortgage moneys may retain this holdback to protect the lender's mortgage. Lenders are not required to do this in all provinces, however, and their interests and your own are not identical. You should consult with your lender on the practice to be followed before completing your construction contract and you should not give the lender any direction to pay mortgage advances directly to the builder until you are assured that the direction which you give is sufficiently restricted to protect your interests.

11 Construction may only be started after the loan has been approved. It may not be started before; however, excavation for the basement can be done prior to approval provided you own the lot. Actual construction must begin within 90 days from the time the approved lender informs you that you may proceed and must be continued at a reasonably steady pace until the house is completed.

12 As construction advances, inspections will be made by CMHC inspectors in accordance with postcard requests made by you. At least four inspections wil be made. The purpose of these inspections is to ensure that your house is built in reasonable conformity with the approved plans and specifications and the NHA building standards. They also enable CMHC to report your rate of progress to the approved lender. The latter needs to be kept informed so that their solicitor can be advised when and how much money to advance to you. These advances will be arranged with a certain flexibility so that they suit both parties.



13 Advances are paid to you, and you, in turn, pay your contractor according to your agreement with him. NHA loans are insured by CMHC to protect the investment of the approved lender and you should not confuse this insurance with other types which protect your investment. The approved lender forwards the insurance fee to CMHC and charges the amount of the fee to your mortgage account. On completion of the dwelling CMHC issues a mortgage-insurance policy to the approved lender.

14 When the final inspection is made and your house is complete, the approved lender will inform you when your first payment to them is due; this is usually within two months of completion or moving in. The first payment normally consists of the interest that has accrued on the mortgage advances you have received during construction.

15 Regular monthly payments of principal, interest and taxes begin the following month and continue thereafter for the length of the mortgage term. The taxes are included so that their payment may be spread over the year.

16 When the final monthly payment has been completed you will receive a mortgage discharge from the approved lender. When this has been registered the title to the property becomes clear and the house and lot is all yours.

BUYING A HOUSE FROM A BUILDER.

If you decide **to buy a house** from a builder you will have to consider the convenience of its location, the suitability of the design and the quality of the construction. You will have to determine whether the house fulfils your particular needs and also whether the purchase would be a sound investment.

Habitability

Consider the kind of life your family wants to enjoy, from day to day and over the years. Does the layout of the house fit the way you like to live? Is it large enough now and will it be large enough for your needs in ten years' time? Will it accommodate your present furniture or would you have the added expense of buying new furniture? Is the house particularly exposed to heat or to cold winds and would it be a pleasant place to live in snowy or wet months? Will the members of your family be able to adapt themselves to the way of life that will be largely determined by the plan of this house? Don't compromise too much. Look positively for what you want and don't be satisfied with a "make-do". (The check list on page 46 will help you to appraise the habitability of a house.)

Construction

You need not be an expert or have any construction "know-how" in order to form an opinion on how well the house is built. Even an expert cannot see construction which is hidden behind finished walls and floors. Like you he can only judge what he sees and form impressions. The care with which the house has been finished will give you a clue. If the house is dressed up with "gimmicks" and carelessly finished on the surface, you can guess that there has been the same kind of carelessness in its fundamental construction. A builder who has tried conscientiously to make a high quality product will not be afraid to use simple straightforward finishes without a lot of eye-catching tricks to promote sales and trap the uninitiated and unwary customer. You can plainly see the quality of the plumbing and the hardware and the heating equipment in use. Are they sturdy and made to last?

Of course, if the house is built to conform to NHA standards you are assured that it is a reasonably well built dwelling. But notice whether the builder is using an up-to-date plan, designed by an architect, or whether it is a stock plan that has been repeated over and over again throughout the district. If it is the latter there is some evidence that the builder is more interested in making a quick return on his money than in catering to the ever-changing needs of the contemporary home owner. Look at other houses the builder has produced and, before you arrive at a decision, investigate his reputation for good building.

CHECK LIST for HABITABILITY

The following questions and observations are intended to help prospective home owners evaluate newly built homes. A buyer is advised to take this list in his hand when he goes to look a house over and to check each item thoroughly. He should understand that this list does not tell him what is best, but rather it is designed so that he can make up his own mind on what he likes and does not like, and what he wants and does not want. He should not be misled by sales talk, nor deterred from his purpose in asking these questions.

EXTERIOR

- Study the front of the house from various angles. Do you find it attractive?
- Is the roof a pleasing shape and colour?
- Consider the roof shape from the point of weather. Will it shed the snow or will the snow be trapped in gullies where it can eventually form dangerous icicles?
- Check the flashing around the base of the chimney where the latter meets the roof. It is there to prevent moisture from seeping under the roofing or into the chimney stack.
- The roof space should be ventilated and vents should be located to ensure a through draft. Look for these vents in the gable ends of the roof and beneath the eaves.
- Are the wall areas and windows pleasantly proportioned?
- The fewer wall materials that are used the better your house will look. Unbroken expanses of one material give an effect of size. In view of this, how does your design stack up?
- Does the front door proclaim itself as such and is the service door private and shielded from public view?
- Steps to the front or service doors constitute hazards. The fewer you have to climb, the better.
- In the back or side yard, which should be shielded from the passer-by, there should be an inconspicuously but conveniently located covered storage for garbage cans.
- Is the garage drive straight and easy to manoeuver in?
- Is your garage fitted with a double socket electrical outlet for a block heater, etc., and is there a water tap?
- Are there convenient hose-bibs (water taps) to which to connect the hose for car washing and lawn watering?

ENTRANCE

- Does the main entrance open directly into the living room or is there a vestibule to prevent blasts of cold air penetrating the house?
- There should be room in the vestibule, when opening and closing doors, for two people or more.
- Is there a coat closet adjacent to the front door?
- How much of the living room will have to be used as a passage from the front door to the rest of the house?
- Is there room to accommodate a baby-carriage? (A space about 2'6" wide by 4'0" long is required.) Consider how the carriage will be moved in and out and how many steps must be negotiated.

LIVING ROOM

- Will the dimensions fit your furniture and leave enough space for family activities? Consider your family's size and entertainment occasions.
- Is there a fireplace, and can you group furniture around it?
- What about windows in relation to
  - view
  - privacy
  - cleaning
  - ease of operation
  - curtaining
  - screens and storm-windows
- Is there access directly from the living room to the garden?
- Do you like the finished flooring material?
- Are the electrical outlets conveniently located for
  - radio and television sets
  - reading lights
  - home movies, etc.
  - cleaning equipment
- Do you want a ceiling outlet and do you like the light fixtures?
- Is the location of switches in the living room convenient and what do they control? They should control some baseboard plugs.
- Is there storage space for books, games, hobbies, etc.?

- Is the method of ventilating the living room satisfactory to you?
- How is the living room heated? Will location of registers and cold air returns affect the furniture placing?

DINING

- Is the dining space convenient for serving and cheerful to use?
- Is it large enough for daily needs and for some expansion for entertaining?
- Can it be shut off from the living room?
- Check windows for
  - — location and placing of furniture
  - — privacy from onlookers
  - — ease of operation
  - — cleaning
  - — curtaining
  - — screens and storm windows
- Is there access to a screened outdoor dining area?
- How is the dining room ventilated? Will the system create drafts?
- Will the location of heating registers affect furniture placing?
- Is there adequate storage space for tableware and equipment?
- Is there floor space to accommodate a buffet?
- Are electrical outlets conveniently located
  - — for toaster, coffee-maker, etc.
  - — for cleaning equipment
- Can you use the dining space for other purposes such as hobbies, T.V. viewing, studying, sewing?

KITCHEN

- Go through the motions, mentally, of preparing a meal, then ask yourself if it will be a convenient kitchen to work in.
- It is important that two people be able to move about in the kitchen without getting in each other's way.
- Is it well lit and cheerful, and will it be easy to keep clean?
- Has it lots of storage space which is easy to organize?
- Has it got good counter space of convenient height
  - — beside refrigerator on one side
  - — beside cooker on at least one side
  - — on both sides of sink
  - — beside washing machine if there is one
- Is there a place to keep and operate appliances such as toaster and mixers?
- Will your present equipment fit into the kitchen or will you have to exchange it?
- Is there a special location for a garbage pail?
- Is there a broom closet?
- Are the electrical outlets handy and safe?
- Is there an exhaust fan over the cooker to draw off cooking odours?
- If you are going to do your laundry in the kitchen, is the equipment and layout conveniently arranged to facilitate this task?
- Is access to dining space good? A servery or pass-through from kitchen to dining room is convenient.
- Is there adequate space for meals in the kitchen?
- Is it a short and easy route from kitchen to front door?
- A milk box is a convenience.
- Can your children's play, outdoors and indoors, be supervised from the kitchen?
- Is there somewhere to hang outdoor clothes and put overshoes away at the back door?

HALLWAYS

- Is space wasted on extensive passages at the expense of room space?
- Are passages well lit, upstairs and downstairs?
- Are they free from hazardous steps?
- Is the location of doors convenient in the halls?
- If you had to carry a tray through the halls, around corners and through doorways, could you do this with ease?

STAIRS

- Is their location convenient?
- Are they easy in their stride? (Steep stairs will cause accidents.)
- Are they free from winders which are hazardous and cause problems when moving large pieces of furniture?
- Is there enough headroom when coming **down** stairs, or are you likely to bump your head?
- Can you get furniture up or down them easily?
- Are they well lit?
- Can you reach stair windows for curtaining and cleaning?
- Are the stairs safe for youngsters?
  - — Can you shut off the top with a gate?
  - — Is the handrail firm?
  - — Could a child get its head caught between the balusters?
- Is there a convenient electrical outlet so that you can use a vacuum cleaner on the stairs?

BATHROOM

- Are the fixtures conveniently placed?
- Will a man hit his elbow against a wall when shaving?
- Is the ventilation good?
- Can the shower be completely curtained and are the taps in the right position?
- Is the water pressure satisfactory? Test pressure of upstairs taps while downstairs taps are running.
- Is there sufficient floor space for bathroom equipment (scales, laundry hamper, etc.) and sufficient storage space for medicines, hotwater bottles, lotions, etc.?
- Is there room to accommodate a baby and its special equipment?
- Is the bathroom easy to keep clean?
- Is the lighting adequate and is there an electrical outlet handy?
- Check the bath to see that its enamelled surface has not been abused during installation.

BEDROOMS

- Are the bedrooms large enough to accommodate your furniture, and when it has been placed will there be enough space left?
- Will the windows provide ventilation without causing drafts on beds?
- Do the heating outlets dictate or limit furniture arrangement?
- Will the electrical outlets fit the furniture arrangement?
- Is each bedroom provided with a good-sized clothes closet?
- It is desirable that rods and shelves in children's rooms be adjustable in height.

BASEMENT

- Observe if it is constructed of concrete block or solid concrete. You may have a preference.
- Check for cracks that will let moisture in.
- The floor should slope to a drain.
- Is there sufficient space for fuel storage? Forty cubic feet or a space 3′ x 5′ x 3′ approximately will easily accommodate 1 ton of coal. A 275-gallon oval oil tank measures 28″ wide x 42″ high by 5′-6″ in length.
- Check to see that there are clean-outs for the flues.
- If there is a coal burning heating system, removal of ashes should be as easy as possible and should not involve an awkward route through the house to the outside.
- Is there sufficient head-room?
- The basement should be well ventilated and adequately lighted.
- Are there sufficient electrical circuits in the main panel box to provide for future uses of the basement?
- Steel posts are best, but both wood posts and masonry piers are quite acceptable.

GENERAL

- There should be storage space for
  - linens
  - cleaning equipment
  - trunks, etc.
  - baby-carriage (4′ long x 2′6″ wide)
  - bicycles (6′ long x 2′ wide)
  - storm windows and screens
  - fuel
  - garden equipment
- Is there a place for a hamper or is there a chute to the laundry for dirty clothes?
- How do you intend to place the telephone? Is there room for a seat at the phone?
- Is the access to the attic in a convenient location? Can you reach it conveniently by a stepladder? Access through a hatch in a closet ceiling is awkward.
- Can your fuel be delivered easily?
- How is water heated? And is the size of the tank large enough for the size of the family? (For homes with one bathroom, it is recommended that the tank should hold 30 gallons where there are two bedrooms, and 40 gallons where there are three or four bedrooms. When there are two bathrooms these respective tank sizes should be increased by 20 gallons each.)
- Are meters in a location where they are easily accessible for reading?
- Have screens been provided for all windows and all outside doors?
- If the house is not hooked up to city sewers but has a septic tank, find out where the weeping tile bed is located, and when buying a secondhand house make thorough enquiries about its age. You may find yourself saddled with additional expenses if the system is old.
- Examine the plaster, particularly the ceilings; check to see that it is not likely to need maintenance soon.
- Get your builder to agree to fix any plaster or basement cracks which appear within the first year.
- Where is the thermostat for the furnace? It should be conveniently placed and sheltered from blasts of cold air admitted when opening front or side doors.

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OTTAWA, CANADA

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