BUYING A HOME IN SOUTHERN CALIFORNIA

ALFRED LIVINGSTON

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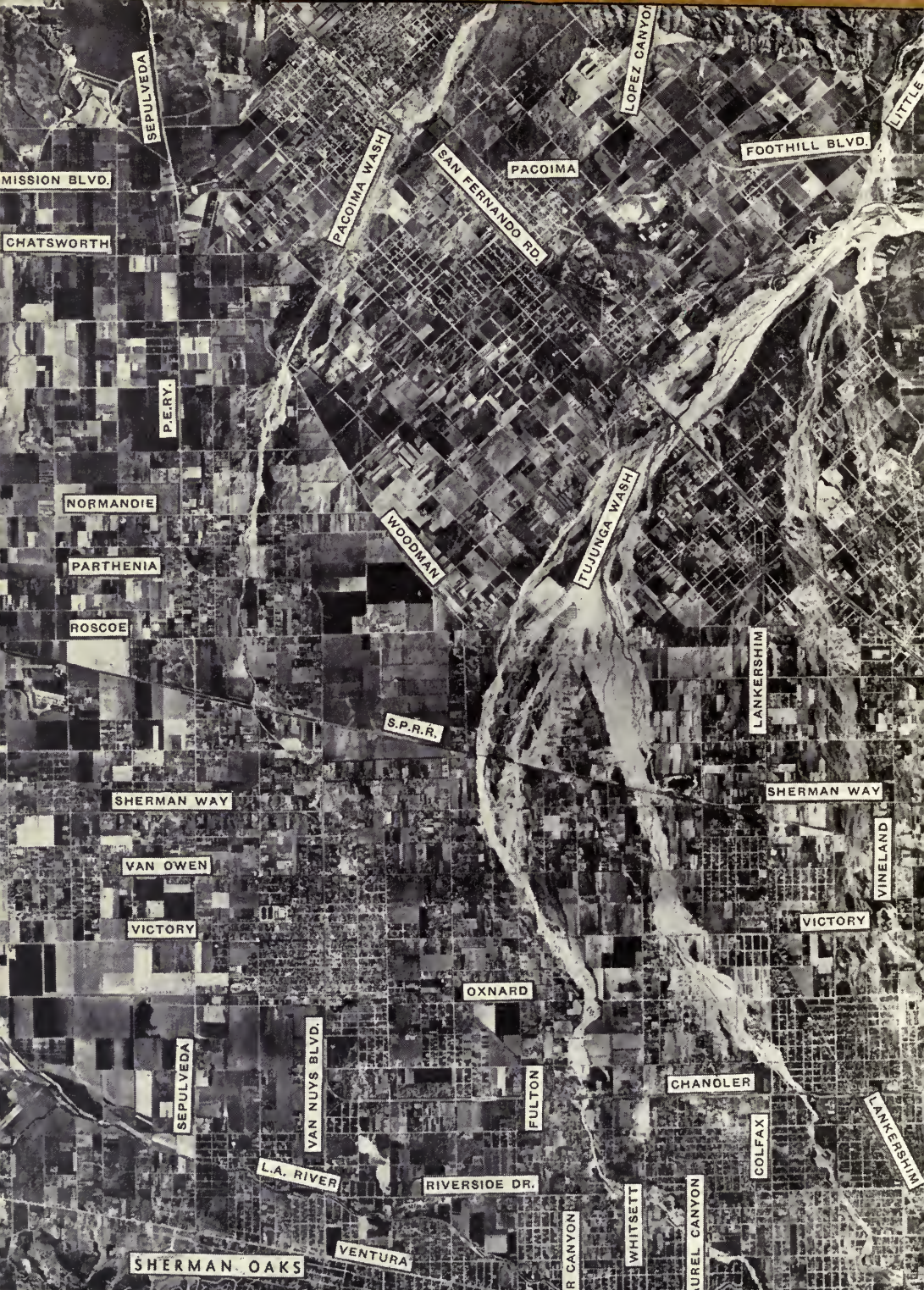

SAN FERNANDO VALLEY

Airview of central portion taken in 1938. Note obscured southern portion of Pacoima Wash in Van Nuys; also the branching pattern developed by Tujunga Wash.

BUYING A HOME IN SOUTHERN CALIFORNIA

by

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INTRODUCTION

With the high cost of building and the restrictions which are being imposed on most types of family dwellings the prospective purchaser of a lot, or a house and lot, needs more than ever to consider well and long before committing himself to the acquisition of any particular piece of property.

In days gone by, the homeowner, after moving into new quarters and finding that there were unthought-of features which made the move disadvantageous, merely listed, or advertised, his holdings for sale, and then started out to find something which might prove more suitable. It is true he went through the inconvenience of showing the property at all sorts of odd hours until the sale was made, but this was incidental.

Even after an unsuccesful venture there seldom was rhyme or reason in making a new choice. Often times the only criterion used in selecting a new home was some one particular feature which more than likely represented something that was merely the opposite of the conditions under which the prospective buyer had been getting along. He moved from flat country to the hills; he moved from the apartment house district to the suburban countryside; he moved from the city to the beach, or visa versa. In most cases the jump was too extreme and soon he was longing for the old familiar surroundings and the old conveniences.

In one district in Los Angeles ten years ago the average house was resold every two years. Its many advantages were offset by lack of convenient transportation facilities, lack of schools, and the heterogenous character of the residents in that particular neighborhood. The subdivision was so new that there was no settled class which would establish the "tone" of the district. It was many years before enough newcomers remained long enough to begin the establishment of such a "tone."

Rate of turnover in any district should be carefully checked, since, while the physical features will tend to aid in the selective process, it is the character of the well established residents which makes or breaks a community. If the rate of turnover is high it is usually to be implied that the less obvious, undesirable features far offset the more obvious desirable features—that after living in a district for a year or two the newcomer finds that the undesirable features more than offset those desirable ones that had influenced him to make the purchase.

The act of buying a home has become something more than a simple transaction in which one obtained a specified minimum of floor space for a more or less maximum of expense. Too often, sadly, this upper limit of expenditure, was stretched to such an extent that the owner became the tail of the kite rather than the master of all he surveyed.

While "Buying a Home" was selected as the title, because it was a more comprehensive term, the author is concerned, primarily, with the physical setting rather than with size and design of the house itself.

Perhaps this is due to the fact that the author has become impressed with the results which some of the

modern, or shall we say simply, present day architects have achieved when they have taken the physical setting into consideration when commissioned to plan a home.

Since even these more successful architects are neither geologists nor meteorologists, nor can they change the physical setting which you have already chosen, it is well for you to consider carefully the physical elements of the site you choose before you decide to build.

You probably can get the nearest to the ideal results which you desire by selecting your own site and planning and building your own house. Perhaps you already have planned your home and are searching for the site to build the house which you think will complete the design you have in mind. Perhaps you are looking for a house that has already been built. The character of the lot is common to all of these possibilities.

The specific localities cited where you can examine an example of either favorable or unfavorable conditions have been chosen at random from hundreds of similar examples. There is no wish to imply that these are the only, or the best or worse, examples—they merely happen to be typical and easily accessible for your examination.

CHAPTER I

SIZE OF THE LOT

There was a time when "buying a lot" was somewhat in the nature of a game. It ranked with window shopping and talking with the vacuum cleaner salesman as one of the mildly exciting forms of entertainment. One really needed lovely furniture, vacuum cleaners, and, perchance, lots. If a salesman happened to show something so irrisistable, and with a down payment and monthly payments so small that you simply could not afford to be without that particular, irreplaceable article, you bought it.

In those days down payments, and the subsequent monthly payments, were so small that you would make the initial venture without too much sacrifice and then pay the subsequent installments month after month until you had had time to form a more "mature" judgment. If then you felt you had not chosen wisely you could allow your interest to lapse and still feel that in having had a chance at "hind sight" you were adequately repaid for what you had invested.

No longer is this true. Choice lots are scarce and all lots have so risen in price as to strain the pocketbook of the average prospective buyer. As a result it has become essential that every detail be considered for the outlay of money, and to be sure your first choice was a wise choice.

One of the first considerations is the size and shape of

the lot. The rare, odd-shaped lot may be dismissed with but one caution—it is often a corner lot and, as a result, may have a high assessed valuation and hence taxes may be excessive.

Assessed Valuation and Taxes

It is well, however, to look up the assessed valuation of any lot before going into escrow for it must be recognized that regardless of what is paid for the lot the buyer actually assumes an additional obligation, a real indebtedness other that the original sales price, when he assumes ownership. Regardless of how much cash you pay or the indebtedness you assume, there is a portion of any lot which you will never own, but for which you will pay the rest of your period as a landholder.

As a matter of fact, the assessed valuation of a lot should always, if only in the buyer's mind, be added to the actual purchase price for, at least within the city limits of Los Angeles, he must each year pay approximately 6 per cent of this amount in taxes, in addition of course to the taxes he pays on such improvements as may be added.

Not only is there the normal tax based upon the assessed valuation but your lot may be subject to special assessments such as street lighting, flood control, and other special-district assessments.

Disadvantages of Narrow Lots

Returning to the consideration of the size and shape of a lot *per se* let us take up first the amount of frontage involved. In San Francisco we still find many portions of the city where homes were and are being built on twenty-five foot lots, relic of the days of the '49'ers. Many of our beach communities and, of all places, some mountain and

desert cabin site areas likewise have this fatal restriction. Even in Los Angeles with its tens of thousands of acres of choice homesites forty-foot lots are common.

With such narrow frontage, however, there can be no side yard and the houses in such a community will be so closely spaced as to give little or no privacy. On narrow lots the houses of necessity must either be tiny shacks or long and narrow boxes, with little or no outlook except to the front and rear. If the garage is placed in the rear there is added expense and inconvenience of a long driveway which may increase the cost several hundred dollars.

A narrow frontage also increases the number of families per block and results in conjested traffic and crowded parking. It also means that you will almost literally live within your neighbor's home. Actually you must listen to his radio, his crying babies, his barking dogs—and you will always have on your mind that he also is having to listen to yours.

The Ideal Frontage

Any increase in frontage up to a maximum figure of sixty-five feet adds greatly to the desirability of the lots. This sixty-five feet is a rather arbitrary figure. It is based on two factors. First, in checking over the plans of a large number of five and six room houses it was found that most of them can be accommodated on a lot with a sixty-five foot frontage; and second, since as noted before, the tax valuation is usually a direct function of the front footage, each foot of increase brings about an increase of that carrying charge which really must be added to the original cost of the property. Any increase in front footage beyond that absolutely necessary is, therefore, to be avoided.

Lots of from fifty to sixty-five foot frontage offer a satisfactory spread to accommodate any of a large number

of different designs. This amount of frontage also allows for a satisfactory amount of sunlight and air circulation, a subject to be discussed in more detail in a later chapter.

Lot Depth

The factor of frontage is fundamental but closely associated with it is the factor of depth. The depth can be much more variable than the frontage for so much depends upon the prospective buyer's idea of what he needs to satisfy his conception of a home. With a growing young family a large backyard with suitable playground equipment helps to solve the busy mother's problems. Likewise the hobby of gardening, whether for beauty or utility (simple landscaping, flower or vegetable gardening), requires ample space.

The planning and arrangement of a barbecue court suitably adjusted to the family needs is a lifelong satisfaction to those who care for this sort of thing. One charming hostess whom I know does virtually all of her entertaining in her barbecue court. This she is able to do as the result of rather clever original planning. The barbecue is placed at one end of a grape arbor which provides desirable shade during the summer months. The arbor is so constructed that glass sashes can be inserted in the side walls and a tarpaulin drawn over the whole during the winter months. A fireplace at the end of the arbor opposite the barbecue aids in driving away the bitter chill of winter.

The desire for badminton or tennis courts, kennels, stables, and so forth, are all personal problems and must be allowed for in the original planning.

One final word which refers both to frontage and depth, "Can and will the family take care of the grounds?" If not, "How much will it cost to have the grounds cared for?"

CHAPTER II

LOT TOPOGRAPHY (Hillside Lots)

Southern California with its great variety of landforms, each with its unique underlying geologic structure, presents a grave and perplexing problem to the prospective buyer. Hillside lots usually present the greatest number of problems, though lots in some of the most level areas have serious drawbacks.

For purposes of simplicity, though it entails some tedious repetition, let us consider in order the three major categories; steep hillside lots, gently sloping lots, and lots that are relatively level. Each has its particular appeal and its particular drawbacks.

Added Costs on Hillside Lots

The hillside lot has real attraction but its disadvantages are many and great. In the first place the steeper the lot the more expensive is the foundation. It has been estimated that building costs average at least 10% higher on hillside lots than they do on level lots and often run much higher. This is an average minimum increase in cost and is only offered to emphasize the question of added cost.

Usually, houses built on the uphill side of the street have more overcharge than those on the downhill side. This is easily understandable since on the uphill side an excava-

tion must be made for a garage and special, usually reinforced concrete, construction must be used in order to avoid termites, dry rot and earth slides.

The cost of this excavation may be excessive in those cases where the bed rock is granite or well cemented sandstone. In any case the necessary excavation should be arranged for on a contract basis to insure that the costs be not excessive, or, at least, that they be predetermined.

The cost of the excavation necessary on the uphill side of the street must be added to the cost of the more expensive foundations required on all hillside lots, whether they be above or below street level. In addition, there is the extra cost for a front retaining wall and that of the necessarily long steps leading up to the house.

Also to be considered is the cost of additional steps and retaining walls which may be needed in the backyard to meet the owner's desire to make the hillside usable. A retaining wall three feet high produces only six feet of level ground behind it on a lot with a thirty degree slope. Such a wall will cost a minimum of $1.50 per lineal foot so that for each six feet in depth of backyard which you wish to make available for use in a lot fifty feet wide you must add $75 to the lot's cost. This cost will increase with an increase in the width of the lot or steepness of slope. It will be correspondingly less where the lot is less than fifty feet wide or the slope is less than 30 degrees. Walls more than three feet in height must be of reinforced concrete construction approved by the city engineering department with correspondingly higher costs.

Care of Hillside Lots

Not only are retaining walls an added expense but un-

Roderick McLendon

Figure 1
RETAINING WALLS
Retaining walls not only increase cost of lot but may mar much of the original beauty of the setting.

less such walls are carefully planned and artistically constructed, they may produce a stiff, raw, over developed atmosphere. Be sure that enough informality and naturalness are retained to preserve the essential charm of the sloping contours.

The hillside gardener must be prepared to spend more time watering than does the level lot gardener. Because of the limited area on each terrace any device for mechanical watering runs into a large installation cost. If you do not have a device for mechanical watering, each terrace must be watered individually. Where terraces have not been constructed basins must be dug around each plant which will

not survive our long dry summers and each of these basins, likewise, must be individually watered.

It is common practice to plant grass on slopes. Well tended grassy slopes are much more lovely than ordinary retaining walls but before you resort to this easy (?) way out try mowing such a terrace just once!

If you do construct terraces on any slope on which native trees are growing, and you wish to preserve them, a "tree well" (a wall surrounding a tree so that at least two, three, or more, feet of the original surface is preserved) should be constructed for each one.

Where there is need to terrace your grounds, careful planning will add much to the usefulness of each terrace. Your outdoor barbecue should be close by the kitchen entrance in order to save those extra steps which often make these outdoor dining rooms a chore rather than a pleasure. Likewise your outdoor sitting room should be as conveniently located as your indoor one. Unless it is you will find that you will gradually cease to use it. The service yard, with incinerator, tool shed, clothes lines, etc., should have next consideration. Though they are used at frequent intervals the time spent in them is usually brief so they may be places at some distant location from the house—the second terrace often being suited to this use. If your lot has sufficient width and there is a relatively gentle slope to provide a wide terrace, the service yard may well be placed at the kitchen end of the terrace by placing the barbecue toward the center of the terrace so that it may act as part of the screen to separate the service yard from the outdoor living room. By this arrangement the chimney of the barbecue may also serve the same purpose for the incinerator, though it is best for each to have its own flue. This is quite a

Arthur Gould

Figure 2

IMPROPERLY CONSTRUCTED RETAINING WALLS

Unless retaining walls are placed on good foundations and properly constructed their failure may cause expensive damages.

desirable arrangement since the higher the chimney the more complete is the combustion in the incinerator. It also helps to eliminate undesirable odors since they tend to become lost in the more rapidly moving upper air.

Your flower and vegetable gardens, chicken pens, and

Roderick McLendon

Figure 3
SOIL EROSION ON NEW FILLS

so forth, come next on the list. They may well serve as an adjunct to your outdoor living room since, if you do the work in them yourself, you can carry on and still feel you are one of the group. Fruits, berries, and so forth, can be relegated to the outer extremes, since they need but occasional attention and add least to the living part of the household.

Soil Erosion and Subsurface Drainage

The prevention of possible soil erosion from the lot above and the prevention of soil erosion on your own lot may add to the cost of the lot, may limit the character of the plan-

ning you can use, and may, if you do not take adequate steps, get you in trouble with your neighbors downhill. It must be kept in mind that you may be held responsible if damage results from any change which you make in natural drainage.

Not only is surface water drainage a possible danger but the unseen underground water drainage brings its own problems. Where hillside lots are located in a swale there is always danger of the underground water seeping into basements and garages. The seepage problem is particularly bad at the base of steep slopes. In such locations be sure that adequate drainage is provided behind the foundation walls. This will not only aid in preventing water seepage into the basement but will also help to prevent the settling of the foundation wall itself.

Landslides and Mudflows

Landslides and mudflows are a constant menace though, fortunately, they are usually limited to the occasional year of exceptionally heavy, long-continued rainfall. These dangers are greatest on those hillsides underlain by shales which tend to weather into an adobe type soil.

Shales can be easily recognized. In the first place they are made of grains so fine you will have difficulty in separating any one particle from another and in addition there is another even more distinctive character—they usually break into relatively thin layers.

On the uphill side of the street lots which are underlain by shale which dips (the layers of which are inclined) toward the downhill slope are to be avoided unless sufficiently strong retaining walls are planned to eliminate slippage. The landslide at Point Fermin is an example of the danger

Figure 4

POINT FIRMIN LANDSLIDE

Caused by slippage along shale beds dipping downslope. Note sharp escarpments along recent breaks, and behind them eroded escarpments of more ancient breaks.

induced by such a condition. (See Figure 4). The north slopes of the Santa Monica Mountains are examples, among the many in Southern California, where land slippage due to this cause is a distinct problem.

If you wish to visit a specific locality and study what might happen on lots underlain by shale dipping downhill, the south side of Sepulveda Boulevard just north of the tunnel underneath Mulholland Drive is an excellent example. Here several feet of surface material slid down to the highway, leaving bare bedrock exposed—a very undesirable homesite. (See Figure 5).

Not only do slides occur in areas underlain by shales which dip downslope but another type of slide may occur on any slope underlain by shale because shales tend to weather out to produce soil high in clay content. Any

George Gates

Figure 5

LANDSLIDE IN SHALE AREA

A landslide on Sepulveda Boulevard near Mulholland Drive. A common type failure in steeply dipping shale areas on the uphill side of the street.

slope with soil high in clay content is subject to slides. Technically these slides differ from those of the Point Fermin type and should be spoken of as mud flows. Regardless of what we call them the results are equally disastrous.

Many areas in Southern California suffer from this tendency of clay soils to migrate downhill when wetted. You can readily recognize such areas by observing the character of the native vegetation which covers the slopes. Almost without exception, in Southern California, the clay content of the underlying soil is high if the native plant cover is composed of grasses.

Figure 6
CHALK HILL SHALES NORTH OF VENTURA BOULEVARD—WESTERN SAN FERNANDO VALLEY

In the so-called "Chalk Hills" district on the north side of the Santa Monica Mountains at the western end of the San Fernando Valley this phenomenon is a particularly dominant feature. Since this area has remained in its natural state until a recent subdivision partially obscured some of the natural features it is a good region to study the normal results to be expected when the surface is underlain with shales. Figure 6 is an airphoto showing three natural slides of recent origin. Any of the adjacent area is subject to a similar slide condition. Since this is so, each lot must be examined to see whether or not it is subject to this same trouble.

Roderick McLendon

Figure 7

NICHOLS CANYON

Steep slopes may be future hazards to life as well as requiring expensive retaining walls. Narrow, curved roads increase possibility of automobile accidents.

Lots in "So-Called" Granite Quarries

Building sites which have been produced by excavating steep hillside slopes or by flattening ridge tops present some extremely serious problems. Needless to say, lots developed in such a manner are denuded of top soil. A complete new soil cover will have to be provided before any planting can be done. Unsightly scars due either to the excavation or to the dumping of excavated material are difficult to eradicate. In some of the areas in the Hollywood Hills where this is being carried on in a wholesale fashion it will be many, many years before they will be restored to beauty.

Such excavated lots must be examined with great care in order to be sure that you are not acquiring more trouble than the scenic outlook warrants. Possible landslides and mudflows may occur and the damage resulting from them may be chargeable to you.

In many such locations there is not enough bedrock exposed upon which to set the foundation of your house. Since fills on steeply sloping ground continue to settle for a long, long time foundations should never be placed on them. I know of such fills that show fresh settling cracks fifteen years after they were made. Check carefully before you acquire one of these "excavated-filled" hillside locations.

Foundation Problems

All hillside lots have special foundation problems. These are usually more critical on the downhill side of the street but it must be remembered that variations of them also occur on lots on the uphill side. The foundation on the street side of the house often is placed on an insecure footing of fill material which was placed there when the original road cut was made. In contrast to this the foundation under the center of the house (under the back of the lower floor) may be set on firm bedrock since a cut is usually made to accommodate the lower rooms. The wall away from the street (at the rear of the house) is usually set either upon the fill taken from the midsection excavation or upon the normal soil originally found there. (See Figure 8).

Not only do fills settle but all soils on hillsides inevitably creep or flow. Any foundation set on fill is going to settle when the fill settles; any foundation set on soil is going to move when the soil creeps or flows.

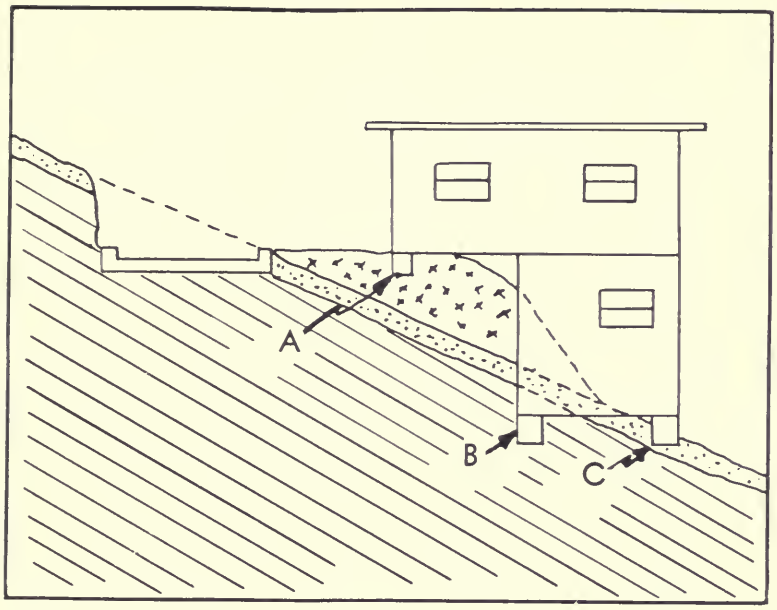


Figure 8

Diagrammatic cross section showing foundations set on (A) fill; (B) bedrock; (C) original soil.

The placing of foundations on different types of material always results in the settling of one part of the house more than another. This causes cracked plaster, bound doors and windows, and other inconveniences. In one house I examined recently it cost $1700 to bring the house back to level and to rebuild the foundations to forestall future settling and $900 more to redecorate the interior.

Builders are prone to say, and actually to believe, that by using various widths of footings on the varied types of material they can prevent differential settling of a house, even though there may be two or three types under that house. *They cannot.* If the fill settles, the foundation settles with it, regardless of the width of the footing. The

chief function which width of footing serves is to determine how far a foundation will sink into a given type of ground, depending upon the load supported. See that your builder sets all hillside foundations on bedrock. Assume your extra expense before the house is built—don't wait until it begins settling and then start the endless task of patching.

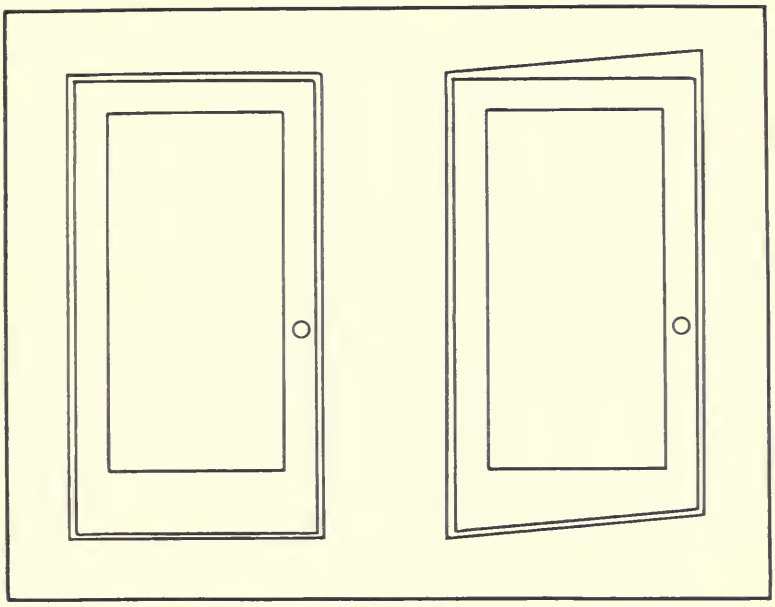
In addition to its effect upon the foundations, fill rarely has the texture, structure, or fertility to adequately support the plants you want to grow. It is usually desirable to bring in new top soil before you start your landscaping. In fact, most hillside soils, because they are usually relatively thin, require more care and fertilization than do most soils in flatlying areas.

How to Check for Hillside Weaknesses

If you are considering the purchase of a hillside house rather than just a lot you can check quickly and easily whether the house has any weaknesses due to undesirable geologic conditions. First, arm yourself with a small carpenter's level and a small square. These can be bought in almost any variety store at fifty cents apiece or less. Any good carpenter knows that these are not accurate enough to use on the job but you will find them accurate enough to serve your purpose since you are concerned only with whether or not the house has settled; not with how much it has settled.

So armed, approach the house with confidence. First, check both outside and inside walls for any cracks which may have developed. Also check for cracks which may have been partially recovered by later redecoration.

Then you must next determine whether the house is plumb. Place the level on the floor in several places in



A Figure 9 B

(A) Properly fitting door. *(B) Ill fit, due to foundation failure; top of door gaping, bottom trimmed to fit.*

each room. At each location orient the level parallel with the side walls and gradually rotate it until it is parallel with the front walls. If the level bubble runs to one end of the bubble tube you know the floor is sloping down the opposite direction.

Now place the carpenter's square in the lower corner of the window frames and the door jambs. If they are not square you have a choice of two evils—either poor carpentry or settling foundations. You can check this fairly accurately by trying the square on the top and bottom corners of the doors. They should be square. If not, study carefully how the door fits. It should fit as in "A" in the accompanying Figure 9. If it fits as in "B" in Figure 9 or

shows any variation from that in "A", it has been trimmed after it has been hung in order to relieve the binding due to unequal foundation settling.

If you can ascertain when the last period of interior decoration occurred you can gain a fairly accurate idea as to whether the house is still in the process of settling. Walls tend to crack most often at the corners of doors or windows or in the upper corners of the room.

Now go down to the basement and check the foundation—every foot of it. It may be a dirty job but it will pay dividends. Look specifically for cracks. If you find any, try your carpenter's level on both sides of each. Check this information with that which you obtained from the floors, windows and doors.

Even a novice can locate foundation failures. If he is in doubt as to the seriousness of the situation he will find many reputable house repair contractors who will make an estimate of the cost of the needed adjustments for a nominal fee.

Termites and Dry Rot

While down there under the house check whether or not there are little dusty appearing tubes hanging from the floor joists. Also look for creamy to greyish white, fern like splotches on any of the understructures. Present city building regulations call for the use of treated timbers here but all older houses and many new ones may be subject to dry rot. This is due to the lack of sufficiently trained personnel to meet the needs of a tremendously expanded building industry, so it is best to be sure. If there are either tubes or splotches, call the termite company. Even if its inspector doesn't get the job from you he may get it from

the person who does move in so he will not charge you for the inspection.

If there is any dampness buy with caution. In the first place you will never be able to get rid of the certain musty smell that goes with damp basements. In the second place termites and dry rot go with dampness. And, finally, foundation settling always occurs where the foundation is set on fill or on clay soil that is damp.

Will Your Garden Grow?

Now check outside the house. If there are spots of moss on the ground, other than on the north side of the house, you are in for cold, cheerless winters. Even if the moss appears only on the north side you can be sure that there the soil is sour and soggy most of the year and will need special treatment to make is usable.

Also check the plants that you find in the yard. Are they sunshine or shade lovers? Do they look thrifty? Yes, I know there are some people who simply do not care for the outside of the house but remember that even you may become discouraged if the task you undertake has physical handicaps which you do not have the time to overcome. What is growing may give you an excellent clue to what may be grown and what gardening difficulties may arise.

Possible Nongeologic Disadvantages

Aside from the problems which are essentially geologic in character there are others associated with hillside locations which are of a more personal nature. Some of these are of particular importance in the case of lots on the uphill side of the street; some in case of lots on the downhill side; some common to both.

Lots on the uphill side of the street may provide for a more imposing facade but the steep slope that makes this possible in itself induces the personal problem of the inconvenience of carrying all provisions up long flights of steps.

The location of street lights should also be considered. In many instances the evening view from houses on the uphill side of the street may be spoiled because a street light is located in the direct line of vision in the street below. If your house is on the downhill side of the street be sure this same street light does not shine into your bedroom window. This is a problem which should be considered in any location whether it is on a hillside or not since light in the bedroom makes for light sleeping.

Lots on the uphill and downhill side of the street have this in common, however, that porches may be so high as to present a distinct danger, especially where there are small children in the family. Whether or not there are children, you may be culpable in the eyes of the law if anyone is injured as the result of a menace which you maintain—any hazard by which a person may become injured unless he contributes to this menace by his own carelessness.

Danger from Fires

Fire is another element that must be considered in all hillside locations. This is particularly important in sparsely settled areas, whether they are grasslands or brushlands. Since by regulation grasslands must be cleared annually before they become too much of a fire hazard, they are dangerous for but a short while each year. Due, however, to the high inflammability of dry grasses, the danger is more acute during that short period between the time when these grasses become a menace and the time when they are final-

ly removed. Brushland areas are always a fire menace though brush fires are not so easily started as are grass fires. When they do occur, however, they burn over extensive areas and the heat they create is intense and is sustained longer than that produced by grass fires.

Both grasslands and brush lands are more dangerous if located downhill from you because in most instances an uphill breeze blows during the daytime when the fire menace is greatest. This uphill breeze will tend to fan the flames in your direction.

Another fire danger occurs on steep hillslopes where the streets are laid out directly up the slope. Under such circumstances, due here again to the fact that an updraft usually occurs during the day time, if the houses are closely spaced a fire in the house below may well start the next house above it.

In line with this it might be well to inquire as to just what police and fire protection you in your selected locality can expect. Within the city limits you can expect a certain rather adequate type of protection—very excellent for the most part. In unincorporated areas, however, there may be but limited protection. It is best to know.

Aside from possible dangers, the prospective buyer of a lot upon a hillside must stop and consider his yard from the point of view of usefulness. If you have never trudged up and down the many steps required on a hillside lot, visit a friend who lives in such a location and learn from his experiences.

The Noise Problem

Hillside lots seem to get more than their share of noise. This is not true of course; it is merely that its position upon the side of a hill exposes it directly to many more sources

of sound. Should you move into such a district it will probably disturb you at first to find you can hear distinctly the noise created by a dozen neighbors where before you only had to contend with, as individual things, the noise created by the two neighbors on either side of you. Later on you may come to consider this an asset as it will help to keep you informed of your neighbors comings and goings. Two opposing hillsides are particularly obnoxious. The valley sides act as sounding boards often so accentuating the noise that a passing car seems to roar like a truck.

Gently Sloping Lots

Gently sloping lots, except that they seldom have a view, give a sense of privacy which make them desirable. About the only caution which needs to be observed is that in such areas the water table (the top of the zone saturated with ground water) is usually high. In such areas, particularly if within a zone of even a small amount of drainage, seepage is usually a problem. Water in the basement, termites in the woodwork and damp moss covered ground are common phenomena, especially on north slopes.

Whether it be lot or house, don't let a breath-taking view get the best of your good old common sense. If you cannot duplicate the view on an ideal lot, then be sure you plan adequately to meet the problems your chosen lot presents. They are not insurmountable.

CHAPTER III

LOT TOPOGRAPHY (Cont.)

Lots in Flatlying Areas

Lots in flatlying areas do not as a rule have as many drawbacks as those on hillsides but such disadvantages as they may have are usually more serious than those found on hillside lots.

In the San Fernando Valley, for instance, *any* lot in the bottom of *any* depression, even though that depression is only one foot below the general level of the surrounding region is subject to flood during any average rain—you do not have to wait for "flood" years.

Drainage Channels

These depressions will be considered in two categories. Those which are actual distributaries of Tujunga, Pacoima, and other washes which carry away the runoff from the adjacent mountains and those which were former stream channels but which are now no longer connected with any main drainage channel.

During the development of a subdivision these channels are often so obscured that it is difficult for the untrained observer to recognize them. He can, however, compare a city street map with the topographic maps published by the United States Geological Survey, (there is a detailed map covering each section of Southern California) and

thereby determine where these channels were formerly located. It is a common practice for subdividers to use these former channels for the location of streets thus turning the street itself into a storm drain.

The community of Van Nuys is an example of the first type of channel change—the obscuring of actual distributaries of a wash draining the adjacent mountains. Van Nuys Boulevard, the main north-south street in Van Nuys, and other parallel streets to the east and west, were each in the past one of several distributaries of Pacoima Wash. Verification of this is shown in the topographic map of this area, the Santa Monica Quadrangle published by the United States Geological Survey. Subdividers bought this property because it was cheap, masked the evidence that it was a former stream channel and sold it without regard for the damage the future owners would suffer. If you enjoy playing in the rain, drive to Van Nuys during any moderately heavy storm and help the merchants and others sand bag their front doors to keep out the water.

There are many owners of undesirable lots (they may have acquired them through inheritance, or other "blind" means, or they may have bought them merely because they were cheap for the neighborhood in which they occur) who will so disguise such lots that the buyer may not be aware of the danger involved.

There are many localities where this kind of change may be observed, other than the case cited in Van Nuys. One such locality, which you may visit to see an example of an old channel which has been obscured, extends eastward from the corner of Olive Avenue and Hollywood Way. Water often runs hub-deep here and during heavy storms it is much deeper. The houses for several blocks to the

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Figure 10
TUJUNGA WASH
Intersection of Burbank and Colfax Boulevards, San Fernando Valley. Houses on the right are only about two feet above the present bottom of the stream bed. Any house built on level occupied by first six light poles is subject to flood.

north of Olive Avenue, those on both sides of Hollywood Way, are built on land which was formerly a distributary of Tujunga Wash. The water which normally ran down this wash has been temporarily diverted to run down Hollywood Way, thus greatly aggravating the traffic problem of this street during periods of heavy rain. In addition to the local floodwater problem the so-called soil here is nothing more than the sterile sand of the old wash.

Overflow Zones Adjacent to River Channels

The houses shown in Figure 10, located at the northeast corner of Burbank and Colfax Avenues along the main channel of Tujunga Wash, have been selected at random from dozens of those I have photographed which have been built on the low overflow terraces which border the larger drainage channels in the San Fernando Valley. All of these houses are subject to flood during any period of particularly

heavy rainfall. Even in storms of moderate intensity their owners will have to drive or wade through water to get home.

If alongside any major drainage channel there is a bench, or terrace, somewhat below the general level of the adjacent land just remember that this bench, or terrace, was cut by the stream during time of past floods in trying to make a channel wide enough to take care of the excess waters which surged down during times of these floods. In future floods the stream will again spread out over these terraces and any house located on them is subject to possible damage by the water.

Roderick McLendon

Figure 11

Main Drainage Channels

The pilings shown in the accompanying Figure 11 illustrate another condition which should be avoided in the San Fernando Valley. The wire fences which have been placed to protect, supposedly, the river bank from erosion

Figure 12

TUJUNGA WASH

Looking north from Oxnard and Laurel Canyon Boulevards. Wire retaining walls serve little purpose during major floods. Light colored areas adjacent to channel is covering of sand deposited during March, 1938, storm.

are little more than false fronts. During the normal winter runoff they do serve a purpose in preventing the stream from undercutting its banks, and if properly constructed, may cause some sedimentation behind them.

During a major storm, however, they are worse than useless. At such times the increase in the volume of water causes a similar increase in velocity of flow. This increase in velocity, however, multiplies by many times the stream's capacity for carrying material. Since all the water from Hanson Dam and most of the natural runoff from the Val-

ley itself is thoroughly desilted, the water which collects in the main channel picks up an ever increasing load of sand from the bottom of the stream trench causing it to be rapidly lowered. It is reported that the engineering staff of the Santa Fe Railroad has recognized this as a possibility in streams on any alluvial fan area and as a result have stipulated that all bridge pilings on alluvial fan areas be set at least twenty five feet below the normal level of the stream trench. This seeming anomaly is due to the fact that whereas a stream on an alluvial fan rapidly downcuts during time of flood it drops the load it is carrying when the stream begins to slow down after the crest of the flood is past and as a result the deep channel cut during the storm is refilled.

So far as I have been able to ascertain, the piling lining the banks of the washes in the San Fernando Valley have been set to only a moderate depth—just deep enough to hold them in place during normal winter runoff. During times of flood it is to be expected that increased runoff will cause the stream to downcut to a depth greater than that at which the present pilings are now set. Should this occur the pilings, bound together by wire as they are, would effectively clog the channel and act to prevent normal runoff or so divert the strream as to cause dangerous undercutting of the banks. This sidecutting would be particularly accelerated on the outside of any meander in the stream's course.

For those who would like a more detailed discussion of this subject I refer them to Water-Supply Paper 796-C, "Flood in La Canada Valley, California, January 1, 1934" by Harold C. Troxell and John Q. Peterson of the United States Geologic Survey, Hydrographic Division.

Many people have been led to the belief that the con-

struction of Hanson Dam has eliminated the danger of possible flood damage. This is not so. Until the channel below Hanson Dam is concrete lined someone must, during any flood, determine how much "minor damage" is to be allowed in order to avert a "major catastrophe." All houses bordering the main channel below the dam come under the heading of possible "minor damage."

Do not buy a lot adjacent to any of the major runoff channels (Tujunga Wash, Pacoima Wash, the Los Angeles River, etc.) regardless of how much flood control work has been done for you must keep in mind that "protected" channels have been washed out in the past and there is no assurance that the present system is adequate. Even though such flood control works give the maximum protection for the amount of money spent, you, personally, are taking a chance when you get too close to one.

Possible Flood Areas

This same condition of inadequate protection holds true in many areas in southern California other than the San Fernando Valley. Specifically it applies to both sides of the Santa Monica Mountains, though to somewhat lesser extent on the San Fernando Valley side since the drainage basins on that side are smaller.

Nichols Canyon is a good example of the conditions on the south side of the Santa Monica Mountains. In 1937 a debris basin was constructed at the mouth of the canyon and, from this, a storm drain was constructed to carry the water under Franklin Avenue. In spite of this precaution the runoff was so great in a later storm that the storm drain beneath Franklin Avenue was filled to capacity and the excess water spilled across the street, flooding several homes.

Since that time the capacity of the storm drain has not been increased, but on the other hand many houses have been constructed in Nichols Canyon, many lots have been leveled to bed rock, and many streets have been graded. Some of the soil so stripped has been hauled away but much of it has been piled on steep slopes with no steps taken to prevent its rapid erosion during the next storm. The new houses, graded streets and exposed bedrock will increase the runoff normally expected. The piled up material resulting from the excavating of building sites is subject to active washing and can, during any period of more than average heavy rainfall wash down through the canyon, fill the debris basin and clog the storm drain beneath Franklin Avenue so that it will no longer function. The increased runoff of water and debris during future storms will bring even greater loss than has been experienced in the past. The storm drain is not large enough to carry away the added amount to be expected in the future as the result of the subsequent construction in Nichols Canyon.

Property owners below Nichols Canyon should take immediate steps to see that either the drain capacity be increased or that injunctions be obtained to prevent further building or excavation in the canyon since each house built and each lot excavated adds materially to the inevitable destruction which will come with the next major storm, since in both cases the runoff is increased.

The foothill area from Sunland through Tujunga to Devil's Gate Dam is also in danger, in spite of the attempt to minimize that danger. As a matter of fact the area below and to the east of the Picken's Canyon debris basin is in greater danger now than it was prior to the construction of the debris basin. The disaster which would result from a

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Figure 13
PICKENS CANYON DRAINAGE CHANNEL

flood, comparable to the New Year's Eve flood of 1936-37, or even a much lesser one, would put the Montrose flood disaster to shame, due to the increased population in the area since that occasion.

That this is so can be verified by anyone who will examine the channel leading into the Picken's Canyon debris basin. At a point approximately one quarter of a mile above the basin the east wall of the channel is being undercut. See Figure 13. In spite of the fact that the flow from Picken's Canyon has been less than average throughout all the years since the debris basin was constructed, except for the one flood of 1938, the flood waters had so cut into the easterly bank of the channel that a thin coating of asphalt was put along this bank. So thin was the coating that even the daisies that were covered over had strength enough to push through it. The water flowing down this channel during any subsequent, above normal flow may cut through this bank and make its own way down to Oakmont

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Figure 14

COLFAX AVENUE

Looking south from Magnolia Boulevard. Note that the top of the white fence is below the level of Colfax Avenue as it continues southward. This low spot carries much run-off during any storm.

basin at the head of Verdugo Canyon, destroying such homes as it may find in its course.

Other inadequately protected areas could be cited. The entire foothill, alluvial fan belt from Altadena to Riverside presents similar problems.

Old Drainage Channels

Beside the possible danger along depressions which are actual, present distributaries of the streams now flowing from the mountains there is the possible danger associated with those slight depressions in the Valley which were formerly distributaries but which are now no longer connected with the main runoff channels.

Only two of the many possible examples are offered here for your inspection and continued observation. One of these is the depression occupied by Hartsook Street where it joins Colfax Boulevard. The other is Lincoln Street to the northward of Alameda Avenue opposite the north entrance to the Walt Disney Studio.

In the first instance Hartsook Street was a compromise adjustment of a channel which originally ran somewhat diagonally from west to east across Colfax Avenue. See Figure 14. At present the "channel" now follows Hartsook Street to its junction with Colfax Avenue thence southward along Colfax to the corner of Otsega Street and thence southeasterly.

Though this channel has no connection with any wash draining the adjacent mountains, merely carrying the water which falls on a small local portion of the San Fernando Valley, it has been known to have had a flow greater than four feet deep. In spite of this known fact and the added fact that many houses and apartments have been constructed at the upper end of the drainage area (thus increasing the

Figure 15

Drainage channel in the vicinity of Alameda Avenue and Lincoln Street.

possible runoff) houses are now being constructed along the bottom of the present channel. These are subject to future flood damage as a result of any heavy rainfall in this part of the valley. By retarding the runoff they, in turn, increase the possible damage to be suffered by the houses that already have been constructed along this channel.

In the second instance illustrated in Figure 15 Lincoln Street was located, for three blocks north of Alameda Avenue, along a channel which can be traced on to the northward through a still unsubdivided field to the north of Olive Avenue. Though the drainage area north of Alameda Avenue is only one and seven-tenth square miles in extent the runoff floods Lincoln Street and Alameda Avenue to such an extent that a section of curbing along the south side of Alameda Avenue was removed and the channel below that point was concrete lined to aid the runoff through the adjacent property in order to protect this property from flood damage. Below this property, however, the subdividers merely smoothed out the channel and made it into a street, Parkside Avenue.

During any major rain in the eastern end of the San Fernando Valley, Lincoln Street becomes a drainage channel as far as Alameda Avenue. The water then floods across Alameda and down the aforementioned concrete lined portion of the channel. Below this point the water then flows down Parkside Avenue. If it merely flooded the street itself this might not be so bad, unless you seriously object to driving hub deep through water to get home, but during extra heavy rains the water overflows the down hill side of the street to such an extent that the property owners there must erect sandbag barriers to keep the water from their homes.

Figure 16

COYOTE CREEK EAST OF ARTESIA, CALIFORNIA

Flooding of homes and fields is common, even during storms of moderate intensity.

Floodplain Areas

Alluvial fan areas at the mouths of canyons are not the only flatlying regions which may suffer from floods. The lower Los Angeles Plain from the Los Angeles River eastward to the Santa Ana River is, similarly, effected by floods. Here the violence attending the floods near the mountains is missing but the damage, though milder in form, is often greater. See Figure 16.

The flooding may be only temporary but it always re-

sults in dampness. The sickness and death rate in many localities here is much higher than the average county sickness and death rate and has been attributed mainly to the effect of dampness which at times attains a condition of standing water actually covering the lot. If in doubt concerning the healthfulness of any area check with the city or county health department.

Not only is there the possibility of poor drainage causing standing water but there is the ever increasing danger of breaks occuring in the dikes which now contain the Los Angeles, the San Gabriel, the Santa Ana, and other streams on this plain.

More sand is being brought downstream each year than these rivers can carry with them to the ocean. As a result their stream beds are gradually rising so that in many localities the stream bed of the river is higher than the adjacent lands. Should the retaining walls fail to hold during time of floods such results as is shown in Figure 17 can be expected.

Known Flood Areas

It is sad but true that many persons within the past decade have bought or built homes in areas which the flood control district has officially designated on subdivision tract maps as being "subject to inundation."

That means that the flood district has determined that the lot or the particular area will be flooded as a lake or a stream in case of heavy or sustained rain storms.

State law requires the flood engineer to report on each subdivision, but does not prevent the subdivider from selling these lots.

The buyer of the lot is presumed to have checked for

Figure 17

SAN GABRIEL RIVER

Break in retaining wall during the flood of 1938 caused extensive flooding of the adjacent areas.

such a flood warning on the tract map at the time of purchase.

Many persons today, however, are living in potential flood danger areas because they did not so check at the time of purchase. They could post themselves by checking their tract maps and by thus acquainting themselves with the true situation of their locations they may be able to avoid being trapped or put to considerable inconvenience if their homes and buildings become isolated.

In the twenty years I have been teaching college stu-

dents geology I remember the disastrious flood of January 1, 1933 at Montrose when houses and humans went toppling downstream in darkness as a flash flood from the foothills came crashing through their homes. Boulders crashed through houses as though they had been made of cardboard.

After it was too late it was discovered that homes had been built either in or adjacent to a dry wash which had not been known to carry much runoff for years before.

Since both the floods of 1933 and 1938, there have been few heavy storms here. In fact, residents locating here since the date of the 1938 flood have not seen nature on a rampage and do not know from experience the sections that are notorious for flooding.

It is not the function of this book to attempt to designate every location that is subject to flood conditions. It is a duty, however, to warn the individual interested in buying a home that he must ever be alert to the possibility of floods and that he should seek the best possible information on his particular district. It might well become a community project. Each local group should take steps to find out whether or not the community as a whole is subject to flood and to take steps to see that protection is provided.

The past few years have been unusually dry in Southern California, but you can be sure that the rains will return with the coming wet cycle of years.

It is only fair to say that a word to the wise should be sufficient now to prepare for or prevent tragedy and loss in the future.

Filled Land

In the flat lying regions care must be taken that the lot in question is not filled land. It has long been the practice

in these areas to fill the old swamps and original gullys. A present example of fill is to be found on the east side of Vermont between Third and Sixth Streets. Few would now recognize that this was formerly a gully thirty feet deep and that it will be years before this fill will have settled sufficiently to support large buildings.

A glance at an early topographic map of Los Angeles will show the location of these swamps and gullys. By checking early topographic maps you can readily detect subsequent fills. You will be wise to avoid any area, however level it may now be, if it is shown as a gully or swamp on one of these early topographic maps.

In addition to possible floods and obscured fills, flat lands have other undesirable possibilities—fogs, earthquakes, high water tables, etc.

Fog Areas

Extensive valleys between even lowlying hills are subject to excessive fog during the winter. Cold air is heavy and, consequently, drains from the hill-lands into the valleys. This cold air causes a condensation of moisture usually present there and causes fog. Two areas come to mind—that between the Baldwin Hills and the low slopes bordering Washington Boulevard, and an even worse area in the gap between the Montebello and the Puente Hills where the San Gabriel River leaves its alluvial fan and enters the Los Angeles Plain.

We used to have a good criterion to follow but with the high price citrus fruit is now bringing this has been lost since citrus groves now have displaced former walnut groves. Where citrus grows best there is little fog. Where walnut trees have thrived there is often fog and always cold winter weather.

Earthquake Damage

Earthquakes always produce their most destructive results in flatlying areas underlain with water-soaked, boggy soils. Here the land can respond to the vibrations of the earth's crust like jelly in a bowl. In contrast to this, areas in which solid bedrock lies close to the surface are rarely affected by earthquakes. The building regulations adopted after the Long Beach earthquake assure fairly adequate protection. Any building constructed prior to the adoption of the present regulations should be examined carefully, for the Long Beach earthquake was a relatively mild one. The damage which resulted was due primarily to poor construction.

Sewage

Though the condition has already been indirectly considered, the home owner must guard specifically against the possibility that the water table (the top of the zone of saturation) does not approach too close to the surface.

A high water table, often expressed as the occurence of shallow water, may cause dampness, possible seepage of water into basements, killing of trees, or the clogging of cesspools. So high has the water risen in some areas that the Board of Supervisors has authorized the drilling of several wells in North Hollywood and others near Reseda from which the excess water will be pumped to the surface and allowed to flow away as surface water.

Some areas in Southern California do not as yet have adequate sewage disposal connections. Here the builder must plan on the use of either septic tank or cesspool.

In using a septic tank the ease of disposal of waste water is dependent upon the surface soil conditions. It is

rarely successful in a region of heavy clay soils unless deep ditches filled with gravel to disposal pipe level are provided. It works most efficiently, of course, where the soil is sandy in character.

Cesspools are more affected by underground conditions than are septic tanks, since disposal in this case depends upon underground seepage from a relatively small surface. In this case if the subsurface material to the depth of fifteen or twenty feet is compact or clay-like it may be necessary to dig two or more cesspools to dispose of the waste from the ordinary family dwelling. In those areas where the water table is high cesspools cannot be used because in this case there is no possible seepage of the waste water into the surrounding sands. This is not just a question of your personal opinion; it is one to be decided by the City Health Department. No building permit will be issued in any area which has no sewer connection until the individual lot has been inspected to determine whether or not the subsoil is permeable enough to allow for adequate disposal of waste water whether it be from cesspool or septic tank. The problem is particularly critical in subdivisions where the lots are small in size. When you go into escrow be sure that the escrow instructions contain a proviso cancelling the deal if a building permit is denied because of poor drainage conditions.

If there is no sewer connection in the area you choose for your future home, you must add the cost of cesspool or septic tank to your lot cost. First, however, check with the city sewer department or the flood control offices to find out whether or not the depth of the water table will permit you to use one or the other type of waste disposal.

The many examples of possible danger in flatlying areas

would seem to imply that such areas should be avoided as a possible location of that future home. This is not true, however. Possibly not more than ten percent of the total area is subject to any appreciable damage.

You can, by judicious selection, avoid the aforementioned dangers and enjoy the many advantages associated with flatlying lots—cheaper construction, easier and more complete utilization, and other characteristics which make flatlying lots the first choice of most home owners.

CHAPTER IV

SOIL

Even the doctors disagree as to just what should be defined as soil. As far as the homeowner is concerned, however, the final decision in the matter can be left to the doctors and the homeowner may call any relatively fine-grained ground cover, soil, and not be far wrong. It is this fine-grained ground cover which he finds on his lot with which he will have to deal when he attempts to raise any kind of plants. In any area that has been subjected to the natural forces of erosion, the upper few inches of the Earth's surface which supports plant life is known as top soil; the decomposed material below this is known as subsoil.

Because of the common custom of plowing or harrowing lots to eliminate the fire menace of dried weeds or grass, or perhaps from mere lack of care, soil erosion has often stripped away the best of the top soil. In such cases only sterile subsoil is now exposed. On the level lots the original top soil may have been covered by sandy flood deposits. In other instances the lot may be covered with materials excavated to make way for foundations, road cuts and the like. In any instance the immediate interest is whether or not the fine-grained ground cover which does occur, is supporting or recently has supported native plant life. If it is, it probably is ready to go on sustaining plant life without extensive treatment.

Presence of Top Soil

If there is no native ground cover present, the depth and character of the soil itself will help you to determine whether or not it is usable in its present condition or whether it can be doctored to usableness. If not, the cost of hauling in new top soil or the cost of bringing the soil that does occur into a usable condition must be added to the purchase price of the lot.

Kinds of Top Soil

Where top soil does exist it can be examined and put into one of three main classes by a relatively simple test of wetting a sample slightly and working it with the hand. If the moistened sample is fine-grained and presses easily into a form which holds its shape but in turn is easily crumbled with the application of any additional force it can be called loam. This is one of the best all round type of soil for it tends to retain about the right amount of moisture but at the same time it is easily tilled.

At one extreme from this desirable type of soil is the type that becomes sticky and plastic when wetted and at the other extreme is the type that is so granular it crumbles and refuses to hold any form.

Here in the Southwest the first of these is often called adobe. Adobe is, however, only one variety of soil more commonly called simply a clay soil. Clay, or adobe, soils may be and often are, very fertile soils. Where they lie on moderate slopes and are to be used for lawns, trees or shrubbery requiring no cultivation they are a very satisfactory type providing they are not too wet. Where they are to be used under annual cultivation, however, they are so difficult to handle that only the expert is justified in working with

them. The average homeowner will find it greatly to his advantage to have workable top soil brought in at once.

The second type, the granular, sandy soils, are in themselves the most unsatisfactory, because they do not retain moisture. In addition to this, sandy soils rarely have much natural fertility and because of their porous nature are subject to the rapid leaching of any plant foods which are added to them. They do have the one advantage, however, in that they can be brought into productivity more readily than can the heavier, clay soils. By adding much humus and some very fine-grained top soil to make the pore spaces smaller they can be improved to an extent that they will hold moisture and make the necessary plant food available as required. Artificial fertilization will offset their normal sterility and satisfactory results can hence be obtained.

This question of soil is one often neglected at the time of the original purchase and often results in many a heartache before the difficulties are recognized and corrected. Early correction of soil weaknesses will add much to that desired home enjoyment.

With the costs as they are in 1949 it is safe to estimate that where the owner does his own work it will cost up to approximately five cents per square foot to put poor soil into first-class condition.

While the cost of terracing has been considered in an earlier chapter it is well here to emphasize the fact that, if terracing is required in order to make use of the lot, it is usually necessary to bring in new top soil to cover the terraced areas before they can be satisfactorily utilized.

Roderick McLendon

Figure 18

SUNSHINE AND SHADOW

View looking northward across Cahuenga Boulevard at Barham Boulevard, 2:00 p.m. February 2, 1950. Houses with southern exposure get full share of sunshine. Houses on north slopes receive only limited amounts.

CHAPTER V

SUNSHINE IN THE HOME

Being a Pollyanna may be commendable in its place but "sunshine in the home" must be something more than a figment of the imagination.

Smog is no longer a word to be put into parentheses—it is a reality and to be rid of it from our city we are willing to spend tens, or even hundreds, of thousands of dollars. Let's be sure that there is no smog in our homes.

Smog can be something more than the smoke and fumes that cause us discomfort because it is "unusual." With smog we can also classify the mere absence of sunshine or even sunshine at the wrong time or place, or it may be just irritating winds, or dampness, or old-fashioned fog—any of those inconveniences attributable to "Old Man Weather."

It is somewhat amusing to note the furor which has been raised by architects, builders and others interested in homes with regards to solar heating, solar lighting and the general topic of insolation as a whole—amusing because of the fact that geographers have been teaching their students these things for many years. Perhaps the laugh is on the geographers in that they failed to arouse enough interest among their students to cause them, in turn, to spread the good tidings that the sun is a friend of the home lover. Be that as it may, now that the interest is aroused, it is well to consider in some detail the effects that insolation has upon each one of us, whether he lives in a cottage or a castle.

Distribution of Solar Energy

So accustomed are we to thinking of Southern California as the land of sunshine that it comes as a surprise, and perhaps somewhat as a shock, to realize that there are literally thousands of homes in Southern California which for many months of the year enjoy less than five hours of sunshine daily.

There are homes on the western or northern slopes of hills which enjoy no sunshine until ten or eleven o'clock in the morning. Homes on the western or northern side of adjacent houses or apartments may likewise be cut off from the morning sun. In like manner homes on eastern or northern slopes may see the sun set in the early afternoon.

Do not buy until you have checked thoroughly. Ask the neighbors, particularly the oldsters, for they feel the chill more severely—and will be more forthright in admitting it.

Insolation

Because of the apparent northward and southward migration of the sun each year the sun's rays will strike the house from constantly changing directions. On March 21 and September 21 the sun rises directly in the east and sets in the west. On these days sunrise will light up the eastern side of any house oriented in a true north-south direction. During the day the sun moves to the south and west until at noon it is directly south of the house; from noon until sunset it continues to move to the westward but also moves northward until it finally sets due west of the house. It will be noticed that on this day the north side of the house has received no direct sunshine.

From March 21 to June 21, however, each sunrise and

each sunset is a little further to the north (approximately eight minutes of arc each day) until on June 21 the sun rises and sets 27.5 degrees north of east and west respectively. At this time of the year the north side of a house will receive direct sunlight for about three hours each morning and afternoon. After June 21, the sun moves southward again giving less and less direct sunlight to the north side of the house until on September 21 is rises directly in the east, again.

After September 21 the sun continues the southward march until December 22 at which time it rises 27.5 degrees south of east. At this time even the east and west sides of the house are receiving only a limited quota of direct sunlight while the north side has no direct sunlight and remains without any until March 21 when the sun has again returned far enough northward to begin to peek around the corner.

Because of this apparent migration of the sun there will be no sunshine on the north side of any house between the months of September 21 and March 21. Between March 21 and September 21, there will be at most only two or three hours of early or late sunshine. Plan your house accordingly.

Does the Sun Strike You Right?

You should always consider the desirability of having the sun strike a particular portion of the house at a particular time of the day. Each must solve his own sunlight problem dependent upon his own desires and the local temperature conditions.

A letter to the nearest weather bureau station will bring a ready reply as to the average monthly temperature and other weather conditions for any given locality. Do not fail to use this possible service. Fortunately most of us can become adjusted to the variations in climate we have here

in Southern California, but why go into any area which might possibly require adjustment unless it is necessary? Know in advance what you must expect.

Technically it is most efficient if the sunshine enters the bedrooms, kitchen, and breakfast nook in the early morning. Brightness helps to start the day off right. The living room should face the south so that the sun's rays will gradually heat it to the point of comfortableness. Your "living garden" will also be most desirable here. Never should the living room be exposed to the westward setting sun. This brings too much light for comfort in that brief hour the family has a chance to sit and relax together before dinner time.

Control of Insolation

Overhangs on the north side of a house serve no function except as a possible rain shield so should be avoided since they decrease the light during the winter time when it is so badly needed.

The desirability of overhangs on the other sides of the house should also be considered. June 21 is the time when the sun is highest in the sky at noon. This date, however, does not conform with the time of greatest heating. It must be remembered though that an overhang placed so as to shut off the sunshine during July, August, and September when our temperatures are highest automatically cuts off the sunshine during April, May, and June—months which are naturally foggy and cool here in Southern California.

Remember that overhangs must function. If they do not, they indicate that the builder was merely aping modern architecture and that he was ignorant of the functions which overhangs serve.

Outdoor porches, patios, gardens, etc., should be planned according to the possible sunshine they might receive since they lose much of their usefulness if placed where sunlight is limited.

Summer and Winter Sunshine

Regardless of the position of the sun the slope of the lot has its own effect. Eastward, westward, and particularly, northward sloping lots fail to receive their full quota of sunshine as compared with southward sloping lots merely because of the slope. This is illustrated in Figure 19.

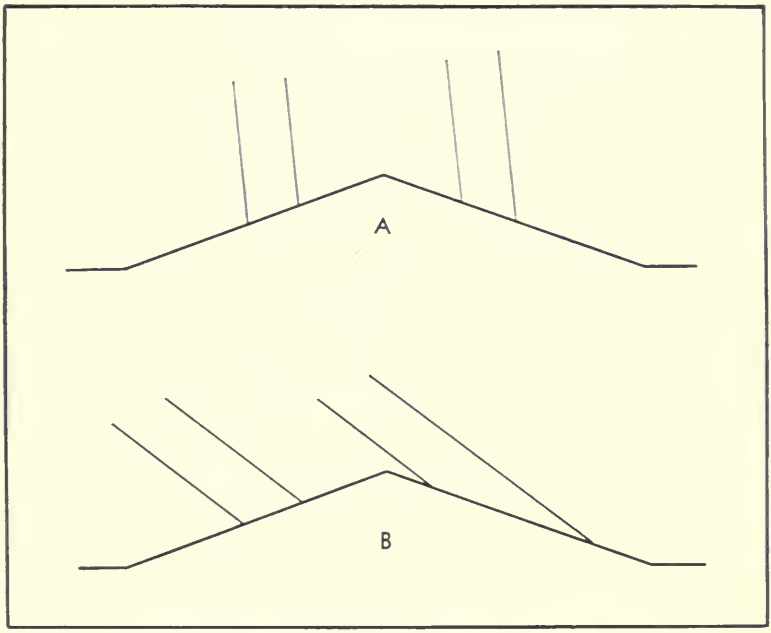

Figure 19

Diagrammatic sketch showing the difference in distribution of a unit of sunshine on a 20 degree slope. (A) June 21st; (B) December 21st.

Even on June 21, when the sun is at its highest here in Los Angeles a lot with a 20 degree slope (common in hilly

regions) receives 10% less sunshine per unit area if the slope is to the northward as compared with a lot sloping similarly to the southward. In the winter time this difference becomes alarming. The same northward sloping lot receives less than half (43 per cent to be fairly accurate) of the sun's energy which a similarly southward sloping lot receives. For many months out of the year, then, north slopes are chill and dark and you are forced indoors while those living on southward facing slopes can enjoy the out-of-doors almost throughout the year.

Some Values of Sunshine

Looking at it from the practical point of view there are many aspects of sunshine that need to be considered. There is of course solar heating of the house itself. In addition there is need of sunshine for vegetation growth, sterilization of the atmosphere, and the mere pleasure one derives from sunshine itself. Let us consider the problems in detail.

Solar Heating

Lack of sunshine raises substantially the heating cost for any household. Fires must burn longer in the morning and be turned on earlier in the afternoon. Bedrooms which do not have afternoon sunshine may be dark, chill and uninviting if fires are not turned on long before bedtime.

When adequately planned for, the sun may be used as the primary source of heat in any house. Sealed, double plate glass windows with a vacuummed air space between are now available. These permit the passage of the short sun's rays into the house. Here they are converted into long, heat waves which, however, connot pass outward through the vacuummed air space between the two plates of

glass. With adequate window surface of this type any house can be adequately heated by sunlight alone, as long as the sun shines, regardless of the outdoor temperatures.

Solar Control of Plants

Lack of sunshine limits greatly the range of plants that you can raise. Camellias, azaleas, begonias, cinarareas, and the like, are lovely in their perfection but become drab neighbors when their bloom is past. Those bright, colorful blooms which are so characteristically Californian are lovers of brilliant sunshine, nor will they thrive without a full daily ration. If you love flowers be sure that at least a small plot in your homestead gets its full quota of sun.

Sunshine and Health

While full sunlight nurtures so many of the beautiful things we cherish, lack of sunshine, on the other hand, nurtures ill health. Germs thrive in damp, cool corners and the person whose body is chilled succumbs most rapidly to their attack. Sunshine cleanses and purifies, for few bacteria can long survive the death dealing rays of the sun. Before the days of vaccines smallpox, black death, and other plagues, claimed their tens of thousands of victims during cycles of worse than usual fogs. Though to a lesser extent, your family's health likewise will suffer if you hide them away from the sun.

Wind Directions and Velocities

While sunshine is a vital fundamental factor in living, possible wind runs it a close second. Wind direction and velocity determines whether or not your windows can be open and whether or not you can use your outside living features unless they are adequately shielded.

Sea and Land Breezes

Along coastal areas the world around there is always what is known as a sea and land breeze. Because the atmosphere normally receives most of its heat from the surface immediately below it the air above the land by midmorning becomes hotter than that over the adjacent water and hence has lower pressure than the air over the water. As a result the air above the ocean starts moving inland at about ten o'clock in the morning. It usually increases in velocity until four or five o'clock in the afternoon. From Santa Monica southward to Long Beach and several miles inland this afternoon breeze must be contended with practically daily throughout the year. The effect decreases inland except where low gaps occur in the hills. Here, due to concentration, wind velocities may increase to such an extent as to become irritating.

Mountain and Valley Breezes

In addition to our sea and land breezes there are the mountain and valley breezes. Air moves down most slopes, and particularly down the canyons, at night and moves upward during the day time. Some of our foothill valleys have this factor so highly developed as to become a problem to the homeowner.

Santa Anas

Occasionally in some localities there are extremely strong winds known as "Santa Anas"—because they were first recognized as blowing through the Santa Ana Canyon. These are particularly bad in any locality where a low gap in the mountains leads from the Mohave Desert into the coastal plains. Here, during the fall and early winter, the

heavy, "high pressure" air over the Mohave Desert is forced across the mountains through these gaps whenever there is a southwestward migration of cold air masses with concomitant high pressures from the Canadian region. Since these winds are relatively rare they need not be considered except where they occur rather persistently where gaps in the mountains are lowest.

Regardless of whether you happen to be in one of those areas where the wind really blows strongly the fact remains that because of the low humidity ratio in Los Angeles any air movement, even a slow breeze, causes evaporation and hence cooling. Determine the general wind direction and plan for adequate protection so that you can enjoy more out-of-door living.

Fog and Frost

Fog is no more "unusual" than is wind so do not accept someone's casual boast that his locality is fog free. Here again the weather bureau can serve you as far as general districts are concerned though they will not be able to tell you the exact conditions existing around your particular lot. Some local areas in Southern California have more than their share of fog and are to be avoided. Most of our areas here are frost free or have so few days of frost that such conditions concern us chiefly from the point of view of what to plant. Unless you are in a known frost free district do not include subtropical plants in your planning. It is disheartening to see them blacken and die after all the care you have taken to raise them.

Sunshine, fog, wind, and rain are usual, everyday affairs so plan for them intelligently. Never assume the chamber of commerce attitude that any undesirable, irritating weather element is unusual.

Roderick McLendon

Figure 20

Narrow, winding street in the Hollywood Hills.

CHAPTER VI

THE PHYSICAL CONDITIONS IN THE SELECTED DISTRICT

Types of Thoroughfares

The type of thoroughfare along which the home is located has a very decided effect upon the future happy status of the family. One aspect of this has been greatly publicized during the past few years—that of the establishment of freeways. That these are necessary for the future growth of the community has been rather generally accepted but the individuals that have been immediately affected by their construction have been vociferous in their objection to them.

For the individual that must travel to many parts of the city either for business or pleasure the freeway seems an essential part of the scheme of things but for the individual whose life is centered in one limited district the restrictions and inconveniences imposed by the freeway may seem a high price for the individual to pay for community betterment.

Freeways, however, are of minor importance to the individual when compared with the normal streets upon which most of our homes are constructed. Of immediate importance is the volume and type of traffic using the street in question. On many thoroughfares the volume of traffic is large and may continue so until late at night. An analysis of

the vehicles which make up this heavy traffic is of particular interest.

Let us consider two parallel streets, namely, Santa Monica and Sunset Boulevards westward from Vermont Avenue. On Santa Monica we find that the Pacific Electric runs two parallel lines with a rather frequent service. In addition to the noise of the trains themselves there is added noise due to the slowing down of traffic, blowing of horns to gain right-of-way and frequent stoppages at train stops. In addition to train service there is an additional fact that due to the industrialization in the southern part of Hollywood and the fact that Santa Monica Boulevard serves as a connecting link across town there is much heavy trucking on Santa Monica.

In contrast while a bus line operates on Sunset Boulevard and twice as many cars use this street they travel at a higher rate of speed with fewer stops than on Santa Monica. Also there is practically no heavy trucking on Sunset. At a result Sunset is apparently much freer of traffic than Santa Monica Boulevard and by actual test the average decibel reading (measure of noise) on Sunset is only about one third of the average registered on Santa Monica.

In addition to average noise nuisances, trains, buses, streetcars, and heavy trucking, present a problem of noise pulsations. The sudden roar of the vehicles or the clanging of bells may well interrupt business, pleasure, rest and so forth. Main thoroughfares are often, too, the routes used by ambulances, police cars, and firefighting apparatus, each adding its momentary wail to the everchanging cacophony of sound.

It is true that main thoroughfares are rarely the loca-

tion of residential property but the buyer must be sure that there is little chance of the street becoming a main traveled road (unless he is buying for strictly investment purposes, a problem with which we are not concerned.)

Noise

Though the property may not be located up a main traffic lane, proximity to one may have decided drawbacks since the sound may carry for some distance. This is particularly true in those districts where the main thoroughfare runs along the bottom of a valley. The hillside homes do not suffer during the daytime because the constancy of the hum of traffic sets the tone at a rather constant pitch. At night, however, the valley sides act as a sounding board and each burst of traffic may come as a roar and each siren's shrill wail may awaken the light sleeper. It is well then, before deciding upon a locality to check noise conditions at various times of the day.

There are many minor conditions which may add to the noise problem. Proximity to stop signs adds materially to the noise, particularly where the cars must climb from the intersection in low or second gear. Streets which wind through hills are definite noise producers, particularly where cuts have been made, for the rock on the uphill side acts as a sounding board to double the volume of sound in those houses on the lower side of the street.

The location of a piece of property with respect to an airfield must be checked with great care. Not only must the present state of affairs be considered but it must be remembered that air travel is increasing rapidly and that present conditions will be greatly aggravated in the future. In addition to the general noise attendant upon planes flying

near the airport it must be remembered that planes, in general, take-off in the direction from which the wind is blowing. There will be a concentration of noise on that side of the airport from which the wind most generally blows and therefore this side of the field is to be shunned as residential property.

While it is true that there is now a concentration of air traffic during the daylight hours it can be anticipated that night traffic will become heavier and heavier in the years to come and that on the windward side of the airport the roar of the take-off will become a recurrent disturbance for the twenty-four hours of the day.

Possible Nuisances

Though noise is one of the greatest problems to be faced there are many other factors which may locally be the direct result of the character of the street.

In the first place the street in many hillside locations is too narrow to permit cars to turn around. This means that either the driver must find a convenient garage driveway or must enter the street from one direction and leave in the opposite direction. This can become a disagreeable inconvenience. If one happens to be provident enough to build a large convenient approach to his garage he will find that the neighbors are using it as their turntable. Not only is there the attendant noise but there is the ever present careless driver who bumps the garage door or runs over the plants at the edge of the drive.

Narrow streets, particularly in hilly locations, may make it difficult for you to enter or leave your own driveway. Under such circumstances you will be tempted to park your car out in the street rather than running it into the garage.

Narrow streets present a distinct hazard in passing ap-

proaching cars when other cars are parked on both sides of the street. In many instances fire apparatus cannot function, a factor which may greatly increase your fire hazard.

Narrow streets are particularly objectionable when the street winds around a hillside. This produces many blind corners. Such blind corners not only add to the nervous strain of driving but are the source of possible fatal accidents.

Amusement and shopping centers, high schools and colleges and other places of assembly bring their throngs whose parked cars may deprive you of your side of the curb. You and your friends must use your driveway with the subsequent inconvenience which comes from multiple parking in a narrow drive.

Considerations Other Than Character of the Street

It can be seen then that the character of the street must be taken into serious consideration before deciding upon the purchase of a lot. It may be true that other factors may be of far greater importance at the time of the purchase but it must be kept firmly in mind that a small minor irritation may over the years offset what was originally thought to have been a major asset.

Along with the actual physical conditions within the district the owner is concerned also with the location of the district with respect to the location of his friends, his amusements and particularly his place of business. Friends may remain such though we see them rarely. If we move too far from them, however, it means definitely that we will see them rarely and that we must build for ourselves a new circle of friends.

Convenience of Transportation

If the golf course, the riding stables, or the boat anchorage is so far away that too much time is consumed getting there and back home again you will soon find you are indulging in those sports at ever-increasing intervals and that you may finally drop them altogether.

Getting to work becomes a daily chore if your home is inconveniently located. Too long a walk at either end of the journey, particularly during inclement weather, imposes a mental barrier which may cause you to begrudge the time you have to spend. You may come to dislike your job, or not want to go home, merely because the trip is an inconvenience. If you drive to work, living to the west of your office makes it necessary for you to drive against the sun both in the morning and in the afternoon. If you are located near the middle of transportation lines you may find the bus or train always full whenever you get aboard so that you are forced to stand.

The cost of the "running expenses" in any location is also a matter to be considered since such costs must be charged against the original cost of your lot. Excessive transportation costs may make such a hole in your budget as to seriously cramp your style. It is immaterial whether it is a tangible train or bus fare or an intangible car cost. Excessive telephone rates may cause you loss of friends as well as money. Water rates in some districts are so high as to make home ownership a real luxury.

CHAPTER VII

ESTHETIC FEATURES

Whenever I think of neighborhood I think of that motion picture production, "The Dead End Kids." Here was displayed all the comforts of modern, affluent, city dwelling set in the midst of outmoded, city squalor.

Architects and landscape designers can produce veritable gems of isolation—units that glow with the personalities of their owners—but isolationism of the family unit is of the Old World, not of the New.

Adults with many outside contacts may let convenience control their choice of a site in an outmoded or rundown district. They can be content in their self-contained unit. Where there are children, however, this is seldom satisfactory. Unless the family can be satisfied to live shut in from its immediate surroundings, the neighborhood must be chosen on the basis of what you as a neighbor can offer the neighborhood.

We all desire to offer our children advantages which we ourselves, perhaps did not enjoy in our youth. Perhaps we did enjoy them in our youth but have not personally been able to afford them for our youngsters. Regardless of the reason one must always keep in mind that in order to live to the fullest each must give to the neighborhood more than he expects from the neighborhood.

To build a substandard house in any district is to automatically draw the resentment of those who have become

established there. From a simple monetary point of view it marks the builder as either one without an appreciation of esthetic values or as one who is deliberately trying to overstep his means.

A first consideration then, before choosing a district is to determine the maximum investment you can safely make. This will determine the type of district you can afford since there is a direct ratio between the original cost of the lot and the cost of the house to be built on it. The cost of the lot should be approximately fifteen to twenty per cent of the cost of the improvements. Particularly choice lots may run slightly more than this. Your total possible investment in a lot will, therefore, be closely controlled by the total investment which you can make in the completed project.

Having determined the price range you can afford, other considerations are determined by personal desires to a greater or less extent unless there are young children in the family. If there be, then, unless you wish to be a chauffeur the rest of your life, convenience to an elementary, junior, and senior high school, and to shopping districts must be a prime controlling factor in making your choice. The more level the land the better the choice of transportation, except of course in newly developed outlying districts. The same applies to schools and shopping districts.

With this factor considered, others pass in rapid review Neighbors who are home owners tend to be more permanent and hence give the long-time tone to a district. Your real estate agent can inform you as to the ratio of home owners to renters in any district. Aside from the manner in which the homes are maintained you can visit the local schools, particularly on Parent-Teachers day.

The physical set up may have much to affect you. Are

the houses too close (regardless of the size of the lot, houses may be placed to disadvantage)? Must you be forced into undesirable intimacy or polite acquiescence by a too-close proximity to the adjacent occupants? Can too intimate contact be modified without imposing that shut in feeling upon yourself? Your neighbor's wash may impress you with his cleanliness but you would hardly consider its sight soul lifting—and in like manner you must consider the effect of yours upon him. Plan privacy for your private affairs.

After solving the neighbor problem some rather personal matters such as physical setting intrude their influence. Some people simply cannot live in the flats; others simply cannot live in the hills. Be sure of yourself and then make sure that your better half reacts in the same manner. An eagle's aerie may allow you to glower down upon a world you fail each day to conquer but it may leave your lovely wife with a sense of frustrated isolationism. What to one gives a feeling of attuneness with the more ethereal things of life produces in others utter boredom.

Aside from construction problems already considered, varying personal problems enter into your choice between the hills and the flats. Transportation, shopping, schools, theaters, etc., are practically always centered in flatlying areas. Hillside homes help you to escape such concentrations but on the other hand for this virtue you must pay the price of traveling to them to meet your needs. And hill lands have a remarkable tendency to reduce cars to rambling wrecks within a short time.

Another personal problem is the question of livestock and pets. A glance at the zoning ordinances will inform you as to whether or not commercial chicken, cattle or horse raising is permissable. Such areas have their obvious draw-

backs but to a lesser degree private ownership of pets and live stock may be equally annoying. Dog lovers often consider themselves as a somewhat select group of people but, while they may be right, I, personally, have never met one nice enough to offset the nuisance of having to listen to his barking dog. The barking becomes particularly obnoxious when the owner leaves his pet alone for hours on end. When their mangy mongrel chooses my baby's hands and face to lick and my lawn for their toilet, friendship ceases.

To say the least, cats kill birds so you can take your choice. Even one chicken, one rabbit, one horse or one cow increases the number of flies with which you have to contend. If you have young children or wish to enjoy your out-of-doors avoid livestock areas.

You naturally wouldn't move into the packing house district but even a perfumery becomes obnoxious with time particularly when your friends rib you good naturedly when they come to see you.

Check your chosen district carefully for animals, industries producing odors or dust or smoke, gravel pits, steel plants, airfields, amusement centers, etc., which might affect your future pleasure. Remember always that the need, or merely the desire, for change may temporarily dull your perception and cause you to overlook disadvantages you may later have reason to regret.

In conclusion let me warn you not to buy blindly. We have all heard of those wonderful "buys" that slipped through someone's fingers because he didn't make his original deposit quickly enough. Forget them. It is my experience that practically every established real estate operator, whether he calls himself salesman, broker, or realtor has

a ready market among professional buyers for any piece of property offered at a price substantially below the market. Your chance of finding a real bargain is small. You will be fortunate to find something that suits your needs at a reasonable price. Such pieces of property do not sell in a day. I do not mean that after you think you have found what seems to fit your needs that you can go home and "think it over" for a month or so without taking a chance of having the property sold before you make up your mind. I do mean, however, that in all probability the particular lot will not be sold today or tomorrow.

Take time then to consult residents in the neighborhood. You may hesitate to do so because you might feel that you are intruding but if you will only stop and think that in buying you are very definitely intruding—perhaps for a long, long time—the intrusion will not seem so personal.

Consult with your own bank manager. If he cannot advise you adequately he will call the branch manager nearest the property and arrange for you to consult with him. Call on the building and loan association with which you might deal. You can rest assured that they will not favor a property upon which they could not advance the money you need for building. Check with the city and county planning boards for zoning regulations.

Caveat Emptor

"Caveat emptor" holds today as much as it ever has in the past. In order to protect yourself as much as possible you might ask the real estate operator with whom you are dealing to answer the following questions. If you can get him to give you a signed set of written answers that would be best, of course, but if not try to have a witness present

when you question him. Any reputable real estate man will be glad to answer to the best of his knowledge. It is only that occasional salesman who will deliberately misrepresent conditions against whom you have to be on guard. Remember you are paying five per cent of the cost of the property for services rendered and for that you have a right to such knowledge of the property as the salesman has.

1. Has the lot ever been subject to landslide or slumping?
2. How much of the lot has been filled?
3. Has this lot ever been subject to flood wash?
4. Has the lot been subject to standing water?
5. How near the surface is the water table?
6. Do the cesspools or septic tanks function properly?
7. Has this house ever been infected with termites?
8. Has it ever been necessary to raise the house due to foundation failure?
9. Does the house at present need to be raised due to foundation failure?
10. How many times has the house changed ownership in the last ten years?

In Conclusion

And unless from this brief discussion you have learned enough to make your own decision get a competent geologist's O.K. before you go ahead. He is the only trained specialist who can adequately aid you in the decision concerning the specific physical details which you must consider. His fee will be small compared with the real estate operator's commission or the architect's fee and the savings he will make for you will repay you many times over.

CHECK LIST

OF

DESIRABLE AND UNDESIRABLE
FACTORS TO BE CONSIDERED
WHEN BUYING A HOME

TO BE USED
IN CONJUCTION WITH

BUYING A HOME
IN
SOUTHERN CALIFORNIA

by

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DUBUQUE, IOWA

I. Lot Size and Adaptability:

	*Yes	No
A. Lot size_____feet by_____feet.		
1. Adequate frontage?	☐	☐
a. Must house be long and narrow?	☐	☐
b. Lot wide enough to give privacy?	☐	☐
c. Is air circulation adequate?	☐	☐
2. Depth adequate for your needs?	☐	☐
a. Size of front yard good?	☐	☐
b. Size of side yard good?	☐	☐
c. Size of back yard good?	☐	☐
3. Taxes $_____	☐	☐
a. Assessed valuation $_____	☐	☐
(1) Special assessments:	☐	☐
(a) Flood Control $_____	☐	☐
(b) Street Lighting $_____	☐	☐
(c)_____	☐	☐
B. Adaptability:		
1. Suitable for children's playground?	☐	☐
2. Room for pingpong, badminton, tennis?	☐	☐
3. Suitable place for barbecue?	☐	☐
4. Place for growing vegetables?	☐	☐
5. Place for growing flowers?	☐	☐
6. Room for desired animals?	☐	☐
7. Can lot be cared for by owner?	☐	☐
a. Cost of hired upkeep $_____	☐	☐

*It is suggested that you use the first column for favorable conditions and the second column for unfavorable conditions. In each case use the score from 1 to 5. If any factor is immaterial leave space blank.

II. Lot Topography

	Yes	No
A. Steep?	☐	☐
B. Rolling hill land?	☐	☐
1. Danger of drainage from above?	☐	☐
a. Possible water in basement?	☐	☐
2. Danger of landslide from above?	☐	☐
3. Is lot, itself, subject to slide?	☐	☐
4. Will mud wash down from above?	☐	☐
5. Will top soil wash down on lot below?	☐	☐
6. Does lot need terracing for best utilization?	☐	☐
7. Relationship to adjacent street?	☐	☐
a. Above street level?	☐	☐
(1) Must garage space be excavated?	☐	☐
(a) Is bedrock hard?	☐	☐
(2) Are retaining walls needed?	☐	☐
(3) Is there need for long front steps?	☐	☐
(4) Do street lights interfere with view?	☐	☐
(5) Are high porches possible menace?	☐	☐
b. Below street level.	☐	☐
(1) Is paving badly cracked?	☐	☐
(2) Is portion near street "filled"?	☐	☐
(3) Does steepness require excess basement?	☐	☐
(4) Is backyard convenient?	☐	☐
(5) Are high porches a hazard?	☐	☐
(6) Are foundation footings on the same type of material?	☐	☐
8. How much must be added to lot cost?_____		
a. For extra cost of foundation? _____	☐	☐
b. For extra cost of retaining walls? _____	☐	☐
c. For extra cost for steps? _____	☐	☐
d. For excavation for garage? _____	☐	☐
C. Level land?	☐	☐
1. Ground water table high?	☐	☐
2. Water in basement?	☐	☐
3. Is lot any lower than adjacent lots?	☐	☐
a. How much?	☐	☐
4. Are storm drains adequate?	☐	☐
5. Is lot subject to overflow or poor drainage during the winter?	☐	☐

III. Geologic Character

	Yes	No
A. Character of bedrock.		
1. Material firm?	☐	☐
a. Sandstone?	☐	☐
b. Shale?	☐	☐
c. Granite?	☐	☐
d. Lava?	☐	☐
2. Dip of Strata.		
a. Do beds dip downslope?	☐	☐
b. Do beds dip upslope?	☐	☐
B. Character of soil.		
1. Good?	☐	☐
2. Too much adobe?	☐	☐
3. Too much sand?	☐	☐
a. Gravel?	☐	☐
4. Soil cover thin?	☐	☐
5. Top soil washed away?	☐	☐
a. Is original brush or sod "in place"?	☐	☐

IV. Sunshine and exposure.

	Yes	No
A. Exposure.	☐	☐
1. Lot slopes.	☐	☐
a. North____; East____; South____; West____.	☐	☐
2. Kitchen.	☐	☐
a. Sunny in morning____; afternoon____;?	☐	☐
3. Living room.	☐	☐
a. Sunny in morning____; afternoon____?	☐	☐
b. Excessive sun in late afternoon in summer	☐	☐
4. Bedrooms.	☐	☐
a. Sunny in morning____; afternoon____;?	☐	☐
B. Daily amount of sunshine.		
1. Sunshine most of the day	☐	☐
2. Sun rises early____; late____?	☐	☐
3. Sun sets early____; late____?	☐	☐
4. Garden plot sunny____; shaded____?	☐	☐
C. Is home shaded by large building	☐	☐
D. Yearly temperatures.		
1. Summer temperature excessively high	☐	☐
2. Winter temperature excessively low	☐	☐
a. Subject to occasional freeze	☐	☐
E. Humidity.		
1. Fog conditions.	☐	☐
a. Summer___; Winter___; Spring___; Fall___;	☐	☐
b. Morning___; Afternoon___; Night___;	☐	☐
2. House cold and damp in winter.	☐	☐

V. Weather Conditions

	Yes	No
a. Spring.		
1. good	☐	☐
2. windy	☐	☐
3. foggy	☐	☐
4. rainy	☐	☐
5. hot	☐	☐
b. Summer.		
1. good	☐	☐
2. windy	☐	☐
3. foggy	☐	☐
4. rainy	☐	☐
5. hot	☐	☐
c. Fall.		
1. good	☐	☐
2. windy	☐	☐
3. foggy	☐	☐
4. rainy	☐	☐
5. hot	☐	☐
d. Winter.		
1. good	☐	☐
2. windy	☐	☐
3. foggy	☐	☐
4. rainy	☐	☐
5. hot	☐	☐

VI. Convenience and cost of location.

	Yes	No
A. Convenience of stores, schools, etc.		
1. Children can walk to school?	☐	☐
2 a. Do you have to drive them?	☐	☐
b. Do you have to help them across a busy street?	☐	☐
c. Is it technically a good school?	☐	☐
d. Are the pupils of the desired status?	☐	☐
2. Children can walk to Sunday School?	☐	☐
3. So close to school as to be noisy?	☐	☐
4. Stores.		
a. Walking distance to nearest store?	☐	☐
b. Convenient distance to your favorite store?	☐	☐
B. Transportation.		
1. Must husband and/or wife use automobile?	☐	☐
a. How long does it take him to get to work?	☐	☐
b. How many miles does he drive?	☐	☐
c. Does he have to drive against the sun?	☐	☐
2. Are transportation facilities adequate?	☐	☐
a. Street car	☐	☐
b. Bus	☐	☐
c. Red cars	☐	☐
3. Is streetcar or bus near at hand?	☐	☐
a. How far to nearest stop?	☐	☐
b. Is car line direct to town?	☐	☐
c. Is car line direct to work?	☐	☐
d. Is frequent schedule maintained?	☐	☐
e. Must you always transfer?	☐	☐
C. Extra costs.		
1. Transportation.	☐	☐
a. Automobile	☐	☐
b. Street car or train	☐	☐
2. Telephone	☐	☐
3. Cost for gardener service $_____	☐	☐

VII. Street relationships. Yes No

A. Heavy traffic? ☐ ☐

B. On street car or Red Car line? ☐ ☐

C. Parking.

1. Usually can park in front of house? ☐ ☐

a. Too close to some amusement center? ☐ ☐

b. Close to apartment houses or courts. ☐ ☐

D. Steep grade so that cars must climb in low gear? ☐ ☐

E. Intersection? (Much starting and stopping) ☐ ☐

F. Width of street.

1. Can turn car around in street? ☐ ☐

2. Can turn car into driveway easily? ☐ ☐

3. Can pass easily when cars are parked? ☐ ☐

4. Do others use your driveway in which to turn? ☐ ☐

5. Is lot on a curve on a narrow street? ☐ ☐

G. Is district quiet? ☐ ☐

1. Day.

a. School? ☐ ☐

b. Hospital? ☐ ☐

c. Fire station? ☐ ☐

d. Close to airport? ☐ ☐

(1) Windward direction? ☐ ☐

2. Night.

a. Hospital? ☐ ☐

b. Fire station? ☐ ☐

c. Traffic noisy? ☐ ☐

d. Close to place of amusement? ☐ ☐

e. Close to airport? ☐ ☐

VIII. Esthetic Location.

	Yes	No
A. View: Scenic?_____Pleasant outlook?_____		
B. Topographical Location.	☐	☐
1. General character of region.	☐	☐
a. Steep?	☐	☐
b. Gently rolling?	☐	☐
c. Flat?	☐	☐
2. Location of lot.		
a. Top of hill?	☐	☐
b. Middle slope?	☐	☐
c. Bottom of hill?	☐	☐
(1) In narrow valley?	☐	☐
C. Neighbors.		
1. Are neighbors home-owners?	☐	☐
2. Above or below your status?	☐	☐
3. Too close to adjoining houses?	☐	☐
4. Do neighbors look down on your lot?	☐	☐
5. Do you have to stare into neighbor's lot?	☐	☐
D. Possible nuisances.		
1. Chickens.		
a. Commercial?	☐	☐
b. Small flock?	☐	☐
2. Rabbits.		
a. Commercial?	☐	☐
b. Small group?	☐	☐
3. Horses.		
a. Commercial?	☐	☐
b. Small group?	☐	☐
4. Cows.		
a. Dairy?	☐	☐
b. Private?	☐	☐
5. Packing house or other industrial odors near?	☐	☐
6. Dust or smoke from industrial concerns (gravel pits, steel plants, etc.)?	☐	☐

IX. Zoning.

	Yes	No
A. City.		
1. One family unit?	☐	☐
2. Multiple unit?	☐	☐
3. Business?	☐	☐
B. Planning Commission Master Plan.		
1. Reserved for single-family units.	☐	☐
2. Reserved for multiple-family units.	☐	☐
3. Reserved for business.	☐	☐
4. Reserved for farm land.	☐	☐
5. Reserved for industrial property.	☐	☐
6. Relationship to possible arterials.	☐	☐

X. City Ordinances and Miscellaneous.

A. Amount of set back._____	☐	☐
B. Placement of garbage (front or back). _____	☐	☐
C. Utility poles.	☐	☐
D. Fire hydrants.	☐	☐
E. Are parkways cared for by the city?	☐	☐
F. Radio reception.	☐	☐
G. Television reception.	☐	☐